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ABSTRACT

This language development activity book is for students who are being trained in one or more skills in the graphic arts industry. It can be used either as an introductory experience for beginning students or as a review for advanced students. Terms of the trade and related business vocabulary are introduced and reinforced through a 9-chapter story, seven sequential lessons on offset lithography procedures, a variety of language development exercises, and a glossary of over 140 graphic arts and business terms. It is suggested that the lessons pertaining to vocational skills be given in conjunction with the student's shop experience. A separate answer key section is provided. (SH)

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State of New Jersey
Department of Education
Division of Vocational Education

YOU'VE GOT IT, DANNY!

LANGUAGE DEVELOPMENT IN GRAPHIC ARTS

Prepared by:
Annette Isaacson, Instructor

Neal B. Perkins, Superintendent
Bergen County Vocational Schools
Paramus, New Jersey

Vocational-Technical
Curriculum Laboratory
Rutgers – The State University
Building 4103 – Kilmer Campus
New Brunswick, New Jersey

June 1976

CE 008 231

NEW JERSEY DEPARTMENT OF EDUCATION

FRED G. BURKE, COMMISSIONER

RALPH H. LATAILLE, DEPUTY COMMISSIONER

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BENJAMIN SHAPIRO, DIRECTOR, VOCATIONAL-CURRICULUM LABORATORY

CURRICULUM LABORATORY

RUTGERS – THE STATE UNIVERSITY

BUILDING 4103 – KILMER CAMPUS

NEW BRUNSWICK, NEW JERSEY

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Highway Printing Company
Paramus, New Jersey

INTRODUCTION

This language development activity book is for students who are being trained in one or more skills in the graphic arts industry. It can be used either as an introductory experience for beginning students or as a review for advanced students.

Terms of the trade and related business vocabulary are introduced and reinforced through a nine-chapter story, seven sequential lessons on offset lithography procedures, a variety of language development exercises, and a glossary of over 140 graphic arts and business terms.

Ideally, the lessons pertaining to vocational skills should be given in conjunction with the student's shop experience. For example,the lesson on platemaking could be given when the student is being taught this skill in his shop class.

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Chapter 1

"RISE AND SHINE"

(1) The house was very quiet. Everyone was sleeping. Outside, the sky began to brighten. As the sunlight shone through the window, Danny Greene opened his eyes. He was awake before the alarm clock buzzed.

(2) Danny usually **depended** upon the alarm clock to wake him. But today was different. The job **interview** was on his mind. The interview was at 10 o'clock that morning. He was excited and feeling a little **up-tight.**

(3) Danny was hoping to get into a **work-study program** at school. The interview was **arranged** by Mr. Labrese. He is the **Cooperative Industrial Education Coordinator** at Beacon County **Vocational School.** A short title for Mr. Labrese is C. I. E. Coordinator.

(4) This was Danny's second interview. He didn't get the first job. Danny knew he wasn't careful about his **appearance.** He thought that was the reason he didn't get the job. He wasn't taking any chances at this interview. He wanted to work for the Hi-Way Printing Company.

(5) This time he was **prepared.** His shoes were polished. His shirt and pants were cleaned and pressed. He showered and shaved before the family was awake. Getting up early gave him extra time to get ready. When Danny finished dressing, he heard his mother call to the family, "Rise and shine, you sleepyheads. It's 7:15 and time to get up."

Note: The paragraphs in each chapter are numbered in parentheses. Some of the exercises contain these **paragraph numbers.** These numbers are given to help you find the answers to the questions. A paragraph number looks like this: (1).

MATCH THE WORD WITH THEIR MEANINGS

Directions: Choose the correct word for each meaning. Write the word in the blank next to its meaning. The paragraph number is the key to the answer. The first one has been done for you.

1. Trusted, relied upon (2) depended

arranged interview depended

2. A place for learning printing or other trades. (3) _____

appearance vocational school prepared

3. Ready (5) _____

prepared industrial arranged

4. To meet and talk with an employer (2) _____

coordinator interview program

5. The look of a person or thing (4) _____

work-study up-tight appearance

6. Feeling tense, nervous (2) _____

depended vocational up-tight

7. Planned, put into proper order (3) _____

arranged cooperative interview

8. A plan for bringing together learning at school and on-the-job training. (3)

_____

education coordinator work-study program

FIND THE MEANING IN THE GLOSSARY

Directions: Use the **glossary** at the back of this book to find the meanings of the words below. Write the meanings in the spaces next to the words.

1. cooperative _____

2. industrial _____

3. education _____

4. coordinator _____

5. Cooperative Industrial Education Coordinator _____

_____

WORD ENDINGS

Directions: There is another ending for each word below. Find the words in the story. Write them in the blanks. The paragraph number will help you find the words. The first one has been done for you.

1. appear (4) appearance
2. vocation (3) _____
3. educate (3) _____
4. prepare (5) _____
5. industry (3) _____
6. depend (2) _____

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

Example: family fam-i-ly

1. prepare _____
2. depend _____
3. interview _____
4. vocational _____
5. arrange _____
6. appearance _____
7. nervous _____
8. program _____
9. coordinator _____
10. education _____
11. industrial _____
12. cooperative _____

Arrange the words above in **ALPHABETICAL ORDER.**
Write them in the blanks below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

3

FIND THE MISSING WORDS

Directions: Refer to the story to find the missing words. Write the words in the blanks. The **paragraph number is the key** to the answer.

1. Danny will have an _____ (2) at 10 o'clock.
2. Danny feels _____ (2) about the interview.
3. Danny hoped to get into a _____ _____ _____ (3).
4. A short title for Mr. Labrese is _____ (3).
5. Danny was careful about his _____ (4).
6. Danny _____ (2) upon the alarm clock to wake him.
7. Danny is a student at the _____ _____ _____ _____ (3).
8. Danny wants to work for the _____ _____ _____ (4).

EXPRESSIONS

When people speak, they often use expressions. Expressions have a special meaning. They help tell how a person feels about someone or something.

Here are two expressions from Chapter 1:

a. up-tight
b. rise and shine

What do you think these expressions mean? Write about it in the spaces below. Your teacher may want to discuss the meanings with the class.

a. _____

_____

b. _____

_____

_____

Watch for other expressions in future chapters. Think about the meanings. In Chapter 2, you will see the expression "striking out." You will get the clue to the meaning from the other words in the sentence.

If you can think of an expression, write it in the space below.

Chapter 2

"GOOD LUCK, DANNY!"

(1) Danny's sister Karrie pulled the covers over her head. Mrs. Greene shook her. "C'mon lazy daisy! Get out of bed, or you'll have a two-mile hike to Glenwood High." Danny's twin brothers, Tony and Tom, heard their mother. They jumped out of bed, and raced for the bathroom.

(2) The mornings were always a mad rush. Mrs. Greene helped get the twins off to school. Then she went to her job. She was a sewing **machine operator.**

(3) "Is that all you're eating for breakfast, Danny?" asked Mrs. Greene.
"I'm not very hungry today, Mom. I guess I'm a little worried about striking out again in an interview."
"You look great today, Danny! This should help you feel more **confident.**"

(4) Danny looked through the window. He could see Mrs. Frisby driving the school bus along Pine Street. "Here comes the bus! I have to leave now. 'Bye Mom. 'Bye kids." The twins followed Danny to the door. He looked down at his little brothers and said, "See you later, squirts."

(5) On the way out he heard his family call, "Good luck, Danny! Hope you get the job!"

MATCH THE WORDS WITH THEIR MEANINGS

Directions: The words in the list match the meanings below. Write the correct words in the blanks beside their meanings.

New Words	Review Words
machine operator (2)	depended
confident (3)	appearance
	arranged

1. _____ _____ – a skilled worker who runs a machine.
2. _____ – trusted, relied upon.
3. _____ – planned, to put in proper order.
4. _____ – to be sure of oneself, feel good about yourself.
5. _____ – the look of a person or thing.

FIND IT IN THE GLOSSARY

Directions: There are words in the glossary which rhyme with each of the words below. Read the meaning of each word. Write the word in the blank. The first letter is your clue.

1. fellows b _____
2. mountain f _____
3. mixer f _____
4. plug s _____
5. grow up b _____
6. basking m _____
7. sat f _____
8. mica p _____

SPLIT THE WORDS INTO SYLLABLES

Use the **dictionary** for this activity.

1. hungry hun-gry _____
2. operator _____
3. confident _____
4. striking _____
5. brother _____
6. Danny _____
7. machine _____
8. worried _____

Arrange the above words in **ALPHABETICAL ORDER.**

Write the words in the blanks below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

KNOWING THE FACTS

Directions: Answer **Yes** or **No** after each sentence.

1. Danny has twin brothers. _____
2. Mrs. Greene works as a bus driver. _____
3. Tony and Tom are older than Danny. _____

4. Danny was very confident._____

5. Danny wasn't hungry._____

6. Mrs. Frisby is a sewing machine operator._____

7. The Greene family lives two miles from Glenwood High School._____

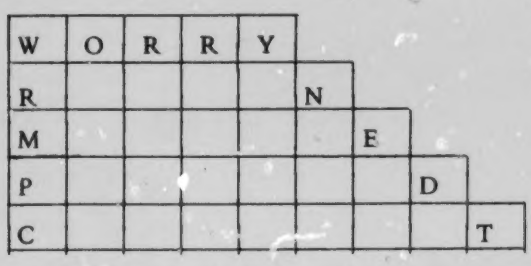
8. Karrie raced for the bathroom._____

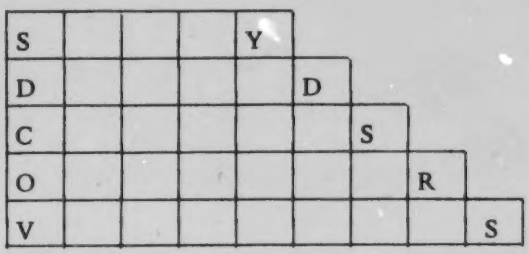
9. Danny lives on Walnut Street._____

10. The family wished Danny good luck._____

SPELLING STAIRWAYS

Directions: Spell out the words in the squares. Choose from the words below. The first one has been done for you. Circle the words that do not fit in the squares.





PREPARED
INTERVIEW
CONFIDENT
REASON
WORRY
VOCATIONAL
MACHINE
CHANCES
STUDY
VOCATIONS
APPEARANCE
DEPEND
OPERATOR
EDUCATION

ABBREVIATIONS

Words are often printed in the shortened form. A **word made shorter** is an **abbreviation.** Below are some abbreviations of **titles** and **places.**

TITLES	PLACES
Mr. for Mister	N. J. for New Jersey
Mrs. for Mistress	U.S. for United States
Dr. for Doctor	St. for Street
Lt. for Lieutenant	Rd. for Road
St. for Saint	Rte. for Route

The above abbreviations begin with a capital letter. Do you know why?

Directions: Fill each blank with the abbreviated form of the word.

1. _____ Wellman opened an office on Bleeker _____
   Doctor — Street

2. Danny lives in Glenwood, _____
   New Jersey

3. _____ Marks Place is a small street in the city of _____
   Saint — New York

4. The bus made many stops on _____ 17.
   Route

5. The Ridge _____ bus stop is near the Hi-Way Printing _____
   Road — Company

6. He is a _____ Army officer. He is _____ James Gray.
   United States — Lieutenant

USING THE YELLOW PAGES

Suppose you are looking for a job.

You want to work in a printing company.

You would like to find a job in your community.

You need the **names, addresses,** and **phone numbers** of printers.

You plan to write or phone for a job application.

You can find the information in the Yellow Pages.

Look in the Yellow Pages under **PRINTERS** and **LITHOGRAPHERS**.

Find 4 printing companies.

Write the information in the spaces below.

Sample: Hi-Way Printing Company
122 Route 17
Paramus, New Jersey
262 – 7001

1. _____

_____

_____

2. _____

_____

_____

_____

3. _____

_____

_____

4. _____

_____

_____

_____

Chapter 3

DANNY MEETS THE BOSS

(1) Mr. Labrese drove Danny to the front **entrance** of the Hi-Way Printing Company. He entered the building. He was in the front office. He **introduced** himself to the **receptionist.**

(2) Mr. Golden shook Danny's hand. Danny gripped his hand **firmly.** They went into Mr. Golden's office and sat down. Though this was Danny's second interview, he still felt **nervous.** He hoped Mr. Golden would **hire** him.

(3) Mr. Golden looked over Danny's job **application.** Danny remembered how carefully he had prepared it. He printed all the **information** neatly. Mr. Labrese helped him prepare the application.

(4) "I can see this will be your first job with a printing company," said Mr. Golden. You are being **trained** in a good vocational school. How serious are you about getting some on-the-job training?"
"I really would like a chance to work here," answered Danny.

(5) Mr. Golden asked Danny some questions. They talked about the **graphic arts** shop at school. Then he said, "We have our own way of training people. I'll explain it to you."

MATCH THE WORDS WITH THEIR MEANINGS

Directions: Choose the correct word for each meaning. Write the word in the blank next to its meaning. The paragraph number is the key to the answer. Some of the words are also in the glossary.

1. Educated, especially in a vocation (4)_____

receptionist **information** **trained**

2. A door, a place to enter (1) _____

hire **entrance** **introduce**

3. Hold tightly (2)_____

entrance **receptionist** **firmly**

11

4. Arts such as drawing, printing, lithography, etc. (5) _____ _____

information **graphic arts** **trained**

5. A person who greets visitors and answers telephone calls (1) _____

job application **introduce** **receptionist**

6. A printed form to fill out with facts about the person seeking a job (3) _____

job application **hire** **entrance**

7. To employ, to pay a person for his work (2) _____

hire **information** **firmly**

8. To present someone; example: "Mary, I would like you to meet John." (1) _____

introduce **trained** **application**

9. Facts (3) _____

job application **receptionist** **information**

. . . . . .

WORD ENDINGS

Look at these words. hope hoping take taking

What happens to the letter **'e'** when you add **'ing'** to **hope** and **take**?

Directions: Give different endings to each word in the list. The first one has been done for you.

	END WITH 'ing'	END WITH 'd' or 'ed'
train	training	trained
arrange		
hire		
explain		
prepare		
interview		
depend		

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. office _____
2. introduce _____
3. receptionist _____
4. gripped _____
5. firmly _____
6. application _____
7. information _____
8. graphic _____
9. training _____
10. nervous _____
11. entrance _____
12. company _____

Arrange the words above in **ALPHABETICAL ORDER**
Write the words in the blanks below

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

REVIEW WORDS – Write a sentence for each of these words:

depended **prepared** **program**

1. _____
2. _____
3. _____

CHOOSE ONE

Directions: Put a circle around the letter for each correct answer.

1. This was Danny's (4)
   a. first interview.
   b. third interview.
   c. second interview.

2. Danny introduced himself to (1)
   a. Mr. Labrese
   b. the receptionist.
   c. the photographer.

3. Danny's school shop is (5)
   a. Graphic Arts.
   b. Office Occupations.
   c. Landscaping.

4. Mr. Golden looked over Danny's (3)
   a. head.
   b. tool box.
   c. job application.

5. Mr. Labrese helped Danny prepare his (3)
   a. breakfast.
   b. application.
   c. homework.

Below is the application blank Danny filled out.

If you were applying for a job, how would you fill out the job application on the next page?

APPLICATION BLANK FOR EMPLOYMENT

DATE *March 5, 1976*

NAME (please print) *Greene* (Last) *Daniel* (First) *Robert* (Middle)

ADDRESS *763 Pine Street* (No. / Street)

CITY *Glenwood* STATE *New Jersey* ZIP CODE *07439* TELEPHONE NO. *417–6023*

SEX: ☒ Male ☐ Female AGE *17* BIRTH DATE *October 10* 19 *59*

HEIGHT *5* ft. *10* in. WEIGHT *149* lbs. MARRIED? *no* NUMBER OF CHILDREN *none*

SOCIAL SECURITY NO. *154 – 0 – 8064*

FATHER LIVING? *no* AGE *–* OCCUPATION *–*

MOTHER LIVING? *yes* AGE *42* OCCUPATION *sewing machine operator*

EDUCATIONAL HISTORY

	Name of school	Years attended from	Years attended to	Last grade completed
Elementary School	*Glenwood Public*	*9/62*	*6/71*	*grade 8*
Junior High School	–	–	–	–
High or Vocational School		*9/71*	*still attending*	

WORK EXPERIENCE

Name and Address of Employer	Kind of work	Dates	Reason for leaving

PERSONAL REFERENCES

Name	Address	Occupation
Mr. Thomas Crane	*62 Oak St., Glenwood, N.J.*	*salesman*
Mrs. Sally Slater	*742 Pine St., Glenwood, N.J.*	*housewife*

Daniel R. Greene
Signature of Applicant

AN APPLICATION BLANK FOR YOU TO FILL OUT

APPLICATION BLANK FOR EMPLOYMENT

DATE _____

NAME *(please print)* _____
Last First Middle

ADDRESS _____
No. Street

CITY _____ STATE _____ ZIP CODE _____ TELEPHONE NO. _____

SEX: ☐ MALE ☐ FEMALE AGE _____ BIRTH DATE _____ 19

HEIGHT ____ Ft. ____ in. WEIGHT ____ lbs. MARRIED? ____ NUMBER OF CHILDREN _____

SOCIAL SECURITY NO. _____

FATHER LIVING? ____ AGE ____ OCCUPATION _____

MOTHER LIVING? ____ AGE ____ OCCUPATION _____

EDUCATIONAL HISTORY

	Name of school	Years attended from	to	Last grade completed
Elementary School				
Junior High School				
High or Vocational School				

WORK EXPERIENCE

Name and Address of Employer	Kind of work	Dates	Reason for leaving

PERSONAL REFERENCES

Name	Address	Occupation

_____
Signature of Applicant

It is good practice to fill out different application forms.
Try filling out the form below.

EMPLOYMENT APPLICATION

Name in Full _____ Phone _____

Address _____
(If R.F.D. or P.O. Box, Give Street or Road Name)

Social Security # _____ Number of Dependents _____
(Include self)

Married ☐ Single ☐ Date of Birth: Month _____ Day _____ Year _____

Birth Place _____ Citizen ☐ Naturalized ☐ When Naturalized _____

In Case of Accident – Notify Name _____ Date Entered U.S. _____

Address _____

EDUCATION

Elementary _____	Yrs.
High School _____	Yrs.
College _____	Yrs.
Correspondence	☐
Eve. or Bus. School	☐
Other _____	
_____	

Height _____ Feet _____ Inches

Weight _____ Lbs.

Color of Hair _____ Color of Eyes _____

Physical Handicap _____

Glasses – Yes ☐ No ☐

Relatives Working Here?

Give Names _____

_____

PREVIOUS EMPLOYERS

1.	Position	From – To	Wages
2.			
3.			
4.			

(The Above Must Cover a Period of 5 Years or More)
(Also Service Record, if any.)

References: _____ Address _____

_____ Address _____

_____ Address _____

Interviewed By: Signature of Applicant

_____

WORD FIND REVIEW

Directions: There are 21 words listed below. Find them in the puzzle. Draw a line around each word.

FOR EXTRA CREDIT: Look for other words in the puzzle. Draw a line around them. Add them to the list. Then arrange all the words in **alphabetical order**. Use the space below.

R D C O P Y M A R G O R P F A R
R E V O C A T I O N A L H N B E
E P C C O N F I D E N T O W S L
L A P E M P L O Y E E I T U I Y
I R A A P P L I C A T I O N N A
E T P X A T R A P A A V G R F P
D M P Q N F I R M E R Q R I O I
U E E S Y V D O M E F P A D R N
C N A B A R R A N G E D P E M T
A T R O F F I C E I Z L H P A R
T R A I N I N G W A S P I E T O
E U N I M A C H I N E T C N I D
Z W C I N T E R V I E W H D O U
P R E P A R E D W O R K E R N C
S T U D Y I N D U S T R I A L E
E N T R A N C E O P E R A T O R

INFORMATION
RECEPTIONIST
APPLICATION
TRAINING
NERVOUS
PHOTOGRAPH
APPEARANCE
PROGRAM
VOCATIONAL
INTERVIEW
DEPEND
INDUSTRIAL
ENTRANCE
GRAPHIC
INTRODUCE
OFFICE
EMPLOYEE
MACHINE
OPERATOR
CONFIDENT
DEPARTMENT

Chapter 4

DANNY IS HIRED

(1) "We have a job open in our **offset printing department.** You have learned quite a lot about offset printing. You will be given a chance to try each step in the **process.** For example, you will begin with **paste-up** work. This is step one. Step two is **photographing** the **copy.** There are seven steps in all. After the steps have been completed, we will decide where you should be **placed.**"

(2) "We have just placed a young lady. Her name is Jodi. She tried each step. Now she has a steady job doing paste-ups. By the way, Jodi got her training in a vocational school. It has a graphic arts program much like the one in the Beacon County Vocational School."

(3) Mr. Golden looked at a chart on the wall. The words **EMPLOYEES WORK SCHEDULE** were printed across the top. "We can fit you in two days a week. How about Tuesdays and Thursdays? Would 8:30 a.m. to 4:30 p.m. be all right?"
"Sure," replied Danny. "Does that mean I have the job?"
Mr. Golden smiled and said, "You've got it, Danny."

MATCH THE WORDS WITH THEIR MEANINGS

Directions: There are three words to choose for each meaning. Choose the **correct word.** Write it in the space next to the meaning. The first one has been done for you. Refer to the **glossary** if you are not sure of the meaning.

1. A special or separate place (1) department

process placed department

2. Employed, given a job (1)_____

schedule copy placed

3. Camera-ready copy. Paste the copy to the artboard (1)_____

paste-up department schedule

4. A timetable, a list of details (3)_____

schedule employees paste-up

5. A special way of doing something (1)_____

placed process department

6. A kind of printing based on the fact that water and oil do not mix (1)_____

copy photographing offset

7. People who work for pay (3) _____

employees schedules processes

8. The lettering and pictures used in the paste-up (1) _____

offset copy process

9. Taking pictures with a camera (1) _____

photographing printing paste-up

. . . . . .

CLASSIFY THE WORDS

Directions: Write the words in the list under the correct **headings.**

mother	teacher	occupation	education
classroom	hire	C.I.E. Coordinator	living room
interview	employee	machine operator	family

HOME	SCHOOL	INDUSTRY
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

TABLE OF CONTENTS

Directions: Find the Table of Contents in this book. Use it to answer the questions.

1. The Glossary begins on page _____

2. What is the title of Chapter 7? _____

3. What is listed first in the Table of Contents? _____

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. offset _____
2. printing _____
3. department _____
4. process _____
5. copy _____
6. placed _____
7. photograph _____
8. employee _____
9. schedule _____
10. program _____

Arrange the words above in **ALPHABETICAL ORDER**
Write the words in the spaces below

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

FIND IT IN THE GLOSSARY

Directions: Find the words **offset lithography** in the glossary. Read the meaning of the words. Then write a sentence, using the words **offset lithography** on the lines below.

_____

_____

KNOWING THE FACTS

Directions: Write **Yes** or **No** after each sentence.

1. A paste-up can be done on a piece of art board._____
2. Offset lithography is a printing process based on the fact that water and grease do not mix._____
3. The paste-up is the last step in the offset lithography printing process._____
4. A process is a special place. _____
5. A schedule can show the working hours of employees._____
6. Jodi has a steady job as a paste-up artist. _____

HOW MANY WORDS IN A WORD?

Directions: Using as many or as few of the letters in the word "LITHOGRAPHY," how many words can you make? You may not use any letter more often than it appears in the word. Write the words in the blanks below.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

UNDERSTANDING A SCHEDULE

Directions: Refer to the schedule and the story to answer the questions below. What do the **arrows** mean? How are **days off** shown?

EMPLOYEES' WORK SCHEDULE – Offset Department

NAME	MON.	TUES.	WED.	THURS.	FRI.	SAT.	Total Hours
Bill	8:30 a.m. to 4:30 p.m.	→	→	→	→		35
Sue	8:30 a.m. to 4:30 p.m.	→	→	→	→		35
Jodi	8:30 a.m. to 4:30 p.m.	8:30 a.m. to 4:30 p.m.	Day Off	Day Off	8:30 a.m. to 4:30 p.m.		21
Tim	8:30 a.m. to 4:30 p.m.	→	→	→	→		35
Joe	Day Off	8:30 a.m. to 4:30 p.m.	→	→	→	9:00 a.m. to 12:00 p.m.	31
Sal	8:30 a.m. to 4:30 p.m.	→	→	→	→		35

Note: The regular workday is 7 hours plus 1 hour for lunch, Monday through Friday. *Do not include lunch* when you total the working hours. Saturday is not a regular workday.

1. Write Danny's name under Sal in the schedule.
2. Write Danny's working hours in the correct spaces in the schedule. Write in his **days off** and **total hours.** (3)
3. What are Bill's hours on Tuesday? _____
4. On which day does Joe work three hours? _____
5. Jodi and Danny work the same day one day a week. Name the day. _____

6. How many employees are there in the offset department? _____

7. How many hours does Tim work in one week? _____

8. Joe's day off is _____

MORE ABBREVIATIONS

Directions: Write the abbreviations for the days of the week and the months of the year.

1. Monday _____
2. Tuesday _____
3. Wednesday _____
4. Thursday _____
5. Friday _____
6. Saturday _____
7. Sunday _____

. . . . . .

1. January _____
2. February _____
3. March _____
4. April _____
5. August _____
6. September _____
7. October _____
8. November _____
9. December _____

Three months of the year are not listed. Do you know why?

. . . . . .

Other Important Abbreviations

Co. for Company (Hi-Way Printing Co.)
no. for number
p. for page
pp. for pages
mi. for mile
m.p.h. for miles per hour
a.m. for morning
p.m. for afternoon
vol. for volume

THE SEVEN STEPS IN OFFSET LITHOGRAPHY

There are seven basic procedures or steps in offset printing. In this book, you will be introduced to this method of printing. Each step is given in lesson form. If you already know the procedures, these lessons will be a good review. The seven steps are:

I. Paste-up

II. Photographing the Copy

III. Developing the Negative

IV. Stripping and Opaquing

V. Burning a Plate

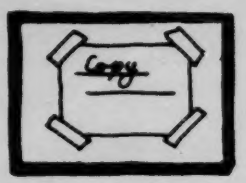
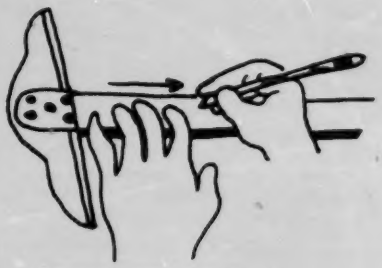
VI. Developing a Plate

VII. Printing from a Plate

STEP I – PASTE-UP

Paste-up is the first step in the offset lithography process.

PASTE-UP – STEP 1
in the
OFFSET LITHOGRAPHY PROCESS

What You Need	How You Use It
1. Light Table or Drawing Board	• This is the table on which you do your work.
 2. Art Board also called Bristol Board or Illustration Board	• Tape the corners of the art board to the table.
3. T Square Triangle Pencil 	• Use the T Square and triangle to lay out evenly spaced straight lines of copy. • Draw the guidelines with a pencil.
4. Rubber Cement	• Paste the copy to the art board with rubber cement.
5. Proof reader	• Spelling and punctuation errors are found and corrected by the proofreader.

Directions: Refer to page on Paste-up for answers to these questions.

1. What is needed for step 1 in the paste-up? _____
2. What is used to help keep the lines of copy straight? _____
3. What is taped to the light table? _____
4. What is used to paste the copy to the art board? _____
5. Why is proofreading important? _____

_____

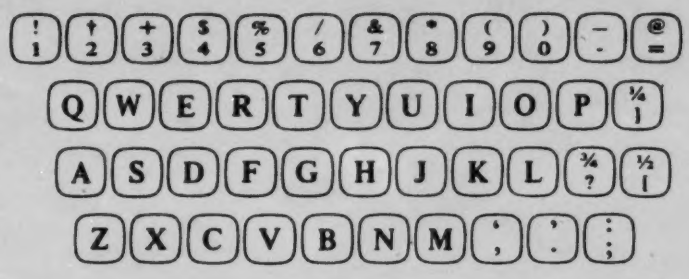
OTHER MATERIALS USED FOR PASTE-UP

What You Need	How You Use It
opaque paint, white and black, paint brush	Paint over unwanted spots etc.
Varityper stock lettering – transfer type	Lay out the lettering. See next page on COLD TYPE.
French curves	For drawing curved lines.
gum or kneaded eraser	To erase pencil marks.
single-edge razor blade, exacto knife, stylus	For cutting and separating lettering from the backing.

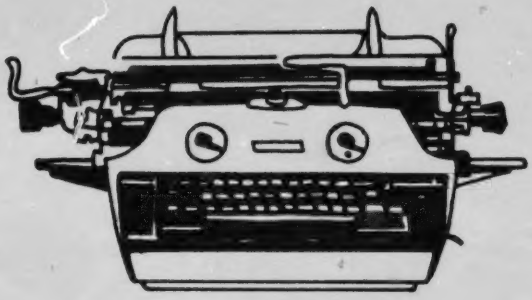
SAFETY TIPS

The Light Table – The top is made of glass. Treat it with care, or it can break and cause serious injury.

Razor Blade, Exacto Knife – When not in use, be sure to store them. When cutting against a curved or a straight edge, keep your fingers away from the edge.



A Composing Machine Keyboard



A VariTyper Composing Machine

10 pt. Gothic Bold Condensed (FL970-10B)

ABCDEFGHIJKLMNOPQRSTUVWXYZ& AB
abcdefghijklmnopqrstuvwxyz abcdefghijklm

10 pt. Bodoni Book (600-10B)

ABCDEFGHIJKLMNOPQRSTUVWXYZ& AB
abcdefghijklmnopqrstuvwxyz abcdefghijklm

10 pt. Bodoni Bold (780-10B)

ABCDEFGHIJKLMNOPQRSTUVWXYZ& AB
abcdefghijklmnopqrstuvwxyz abcdefghijklm

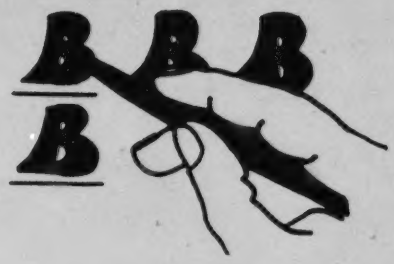
10 pt. Bookman (630-10B)

ABCDEFGHIJKLMNOPQRSTUVWXYZ& AE
abcdefghijklmnopqrstuvwxyz abcdefghijklm

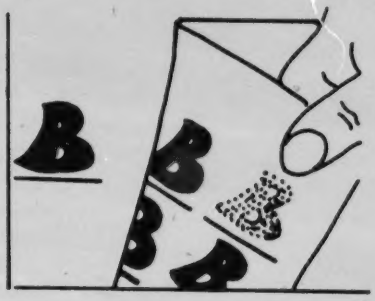
10 pt. Cartoon Type (940-10A)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ ABCDEFG

Examples of VariType
Hundreds of changeable type are available.



1. Place the letter
Then rub it on.



2. Pull away the
transfer sheet.

Stick-on Stock Type

1. Cut out and lift up
the letters with a
stylus.

2. Place and press down
the letters on the art
board.

PASTE-UP MATERIALS QUIZ

1. Find the meaning of the words **cold type** in the glossary. Write the meaning in the blank space. _____

   _____

2. A VariTyper machine looks somewhat like a typewriter you might see in a business office. Answer yes or no._____

3. For what kind of lettering would you use a razor blade or an Exacto knife?_____

4. What is used to paint over unwanted spots on the layout or pasteup?_____

5. French curves are used for_____

6. The VariTyper can produce hundreds of styles of type. Answer yes or no._____

7. How is transfer type used?

   _____

   _____

   _____

   _____

Chapter 5

AN EMBARRASSING MOMENT

(1) When the interview ended, Danny was very excited. He stood up too quickly. Then, he **accidentally** backed into a chair. The chair fell. Danny reached to grab it. But he lost his balance. The chair went down, and Danny went with it.

(2) Danny was **embarrassed.** He picked himself up. He picked up the chair. He wanted to **apologize** to Mr. Golden. But before he could speak, Mr. Golden said, "I can see you're okay, Danny. You got back on your feet fast. You must be excited about the job. That's good. I once bumped into a wall after a job interview. I was excited too."

(3) "Please stay ten more minutes, Danny. I want you to see the rest of the building. Here is a **diagram** of the building. You can follow it while you are being shown around." Mr. Golden looked at the clock. "I have an **appointment** with a paper **salesman.** Please excuse me. I'll ask Marty to show you the building."

(4) Mr. Golden pushed one of the buttons on the phone. He lifted the receiver and dialed 24. The phone rang in the **letterpress** department. "Could you come to my office, Marty? I would like you to meet Danny Greene, a new employee."

MATCH THE WORDS WITH THEIR MEANINGS

Directions: The words in the list match the meanings below. Write the correct words in the blanks beside the meanings. Refer to the glossary if you are not sure of the meaning.

accidentally (1)	apologize (2)	salesman (3)
embarrassed (2)	diagram (3)	letterpress (4)
	appointment (3)	

1. _____ (2) to feel silly, ashamed, or self-conscious.

2. _____ (2) to show you are sorry, excuse oneself.

3. _____ (4) printing from a plate with a raised (relief) surface.

4. _____ (1) happening in an unexpected way.

5. _____ (3) a man whose work is selling.

6. _____ (3) setting a date to meet someone.

7. _____ (3) a drawing of a floor plan for a building. Also, a map or chart.

REVIEW WORDS

Directions: Write in a word you can use in place of the word next to each blank. Use the row of words below.

confident **depended** **employees** **appearance**

1. Danny _____ *(relied)* on the radio for weather reports.
2. The _____ *(workers)* had one hour for lunch.
3. Danny will feel more _____ *(self assured)* when he has gotten some experience.
4. Mr. Golden liked Danny's _____ *(looks)*.

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. accidentally ac–ci–den–tal–ly
2. embarrassed _____
3. apologize _____
4. diagram _____
5. appointment _____
6. letterpress _____
7. salesman _____
8. receiver _____
9. excuse _____
10. building _____

Arrange the above words in **ALPHABETICAL ORDER**

Write the words in the spaces below.

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

ONE OUT OF TWO

Directions: There are two words under each blank. Choose one to complete each sentence.

1. Danny was given a _____ of the building.
   diagram interview
2. Marty was in the _____ department.
   snack letterpress
3. Danny was _____ after his accident.
   confident embarrassed
4. Danny wanted to _____ to Mr. Golden.
   apologize complain
5. The interview was _____
   diagram arranged

ABBREVIATIONS – How much do you remember?

Directions: Write the abbreviation for each of the words listed.

1. October _____ 7. page _____
2. Street _____ 8. morning _____
3. pound _____ 9. New Jersey _____
4. gallon _____ 10. miles per hour _____
5. Mister _____ 11. Thursday _____
6. Company _____ 12. number _____

Do you know why Street and Company begin with a capital letter?

SPELLING STAIRWAYS

Directions: Spell out the words in the squares. They fit across only. Choose from the words below. Circle the words that do not fit in the squares.

1.

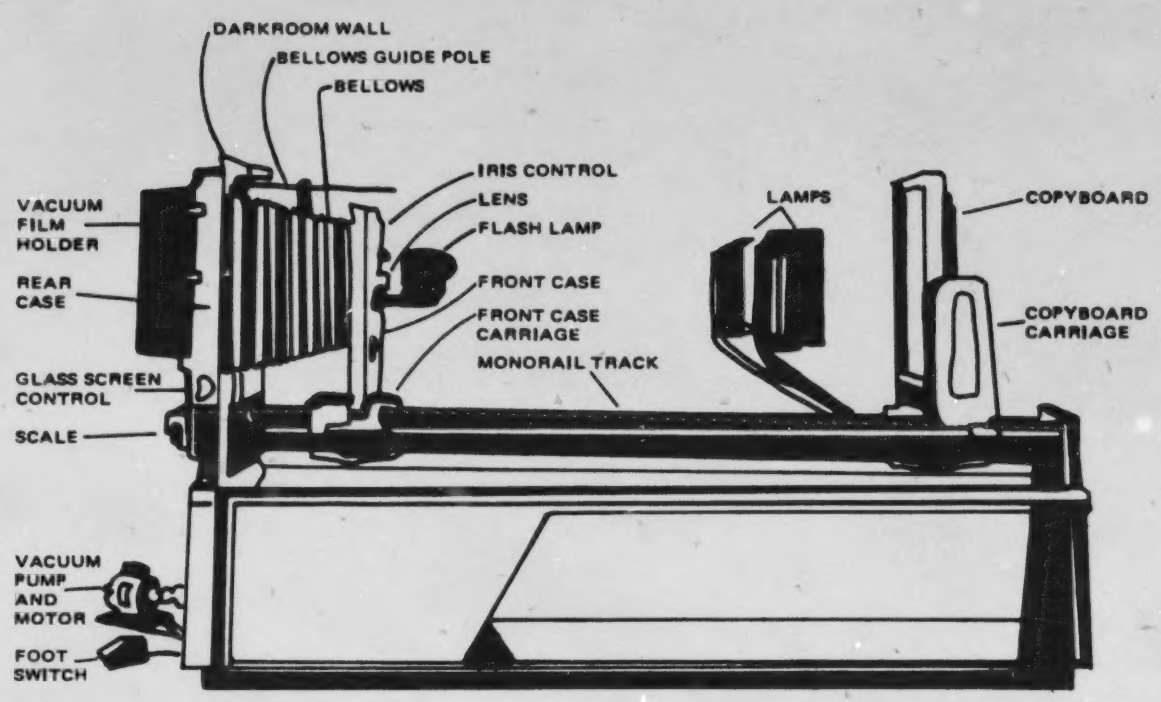
A					T			
D						M		
S							N	
A								E

2.

E				Y			
A					T		
I						Y	
T							E

1.			2.		
	apologize	diagram		timetable	relied
	salesman	copy		review	employ
	vocation	August		appoint	industry

THE HORIZONTAL COPY CAMERA



DARKROOM END
(back end)

COPY END
(front end)

The main parts of a copy camera are:

Front End

1. lens
2. copyboard
3. lights (lamps)

Back End

1. bellows
2. camera back (rear case)

NAME THE PARTS

A. There are six parts labeled for the section of the camera which is located in the darkroom. List the parts in the blanks below.

1. _____ _____ _____
2. _____ _____
3. _____ _____

4. _____

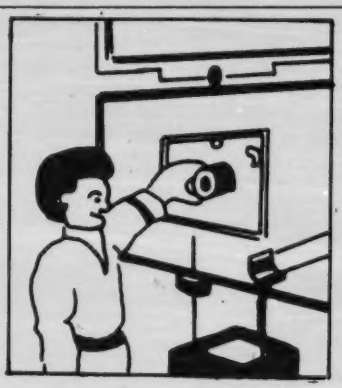
5. _____ _____ _____ _____

6. _____ _____

B. Name four parts of the camera located outside the darkroom.

_____

PHOTOGRAPHING THE COPY – STEP 2
in the
OFFSET LITHOGRAPHY PROCESS

What You Need	How You Use It
1. You need a **copy camera.**	Prepare the camera to **shoot a negative** of the copy.
 2. Copyboard at the copy end of the camera. (front end)	Place the paste-up on the **copyboard** of the camera. Put the glass cover over the paste-up. Be sure the glass is very clean. The words **copy, paste-up,** and **layout** are often used in place of each other.
 3. Aperture and lens at the copy end of the camera. (front end)	a. Set the **aperture** (lens opening) and **lens** according to the directions for the film. b. Use **lens cleaning tissue** to clean the lens.
 4. Film for darkroom end of the camera. (back end)	a. Load the camera with the film. b. Handle the film under **safelights.** c. Wear dry rubber gloves to prevent scratching the negatives. d. Place the exposed film in a **light-tight** box until ready to develop.

Directions: Refer to the page on Photographing the Copy to answer the questions below.

1. What kind of camera is used to take a picture of the copy?_____

   _____

2. Is it correct to use the word **copy** in place of the words **paste-up**? Get your clue from Part 2, How You Use It, for the answer. Write yes or no in this space._____

3. What is used to clean the lens?_____

4. If a spot of dirt is not removed from the glass that covers the copy, will it show on the negative? Answer yes or no._____

5. Which end of the camera is in the darkroom?_____

6. What kind of lights are used in a darkroom?_____

7. To prevent scratching the negatives, wear_____

8. What is put into a light-tight box?_____

GO TO THE GLOSSARY

Directions: Use the Glossary at the back of the book to find the meaning for each word. Write the meaning in the space next to the word.

1. aperture_____

2. safelight_____

3. copyboard_____

4. lens_____

PASTE-UP PRACTICE

Directions: Cut out the pictures and the lines of type on this page. Arrange them on the blank page. Then paste-up the layout.

EXTRA CREDIT ACTIVITY

Cut pictures and words out of magazines. Use them to do a layout and paste-up.

Albert Switzer
Boy Candy Lover

Switzer's—the name that means Cherry Red, Licorice Black and Groovy Grape Candies. In a variety of shapes kids enjoy. Favorites of all ages because they're good.

Switzer's®

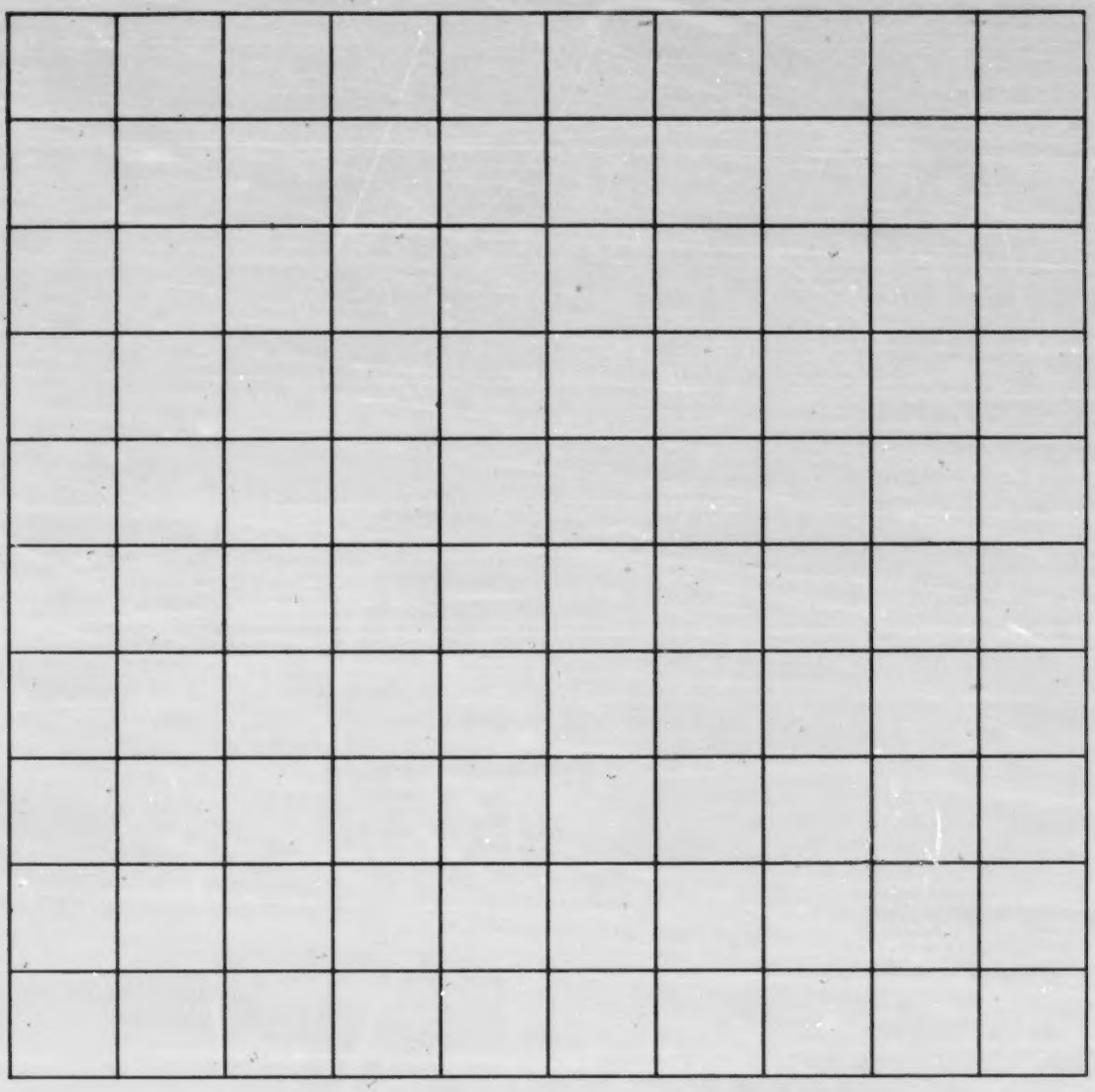
SIZES • FLAVORS • SHAPES

From Bars to Superbags

Switzer Candy Co., *Div. of Beatrice Foods Co.*
621 N. First St., St. Louis, MO 63102

MAKE A PUZZLE

Directions: Make a word find puzzle. You may use your own words. You can also use the words from the list below. Make copies of your puzzle for the class.



copy	company	review	job
grip	clock	hire	placed
study	offset	work	press
firm	order	excuse	salesman
total	table	hour	train

Chapter 6

A QUICK TOUR

(1) "Hello, Danny. I'm Marty Golden. Glad to have you with us." Danny thought Marty must be Mr. Golden's son. He was right. Marty is a printer's **apprentice.** He hopes to become a **master printer** like his father.

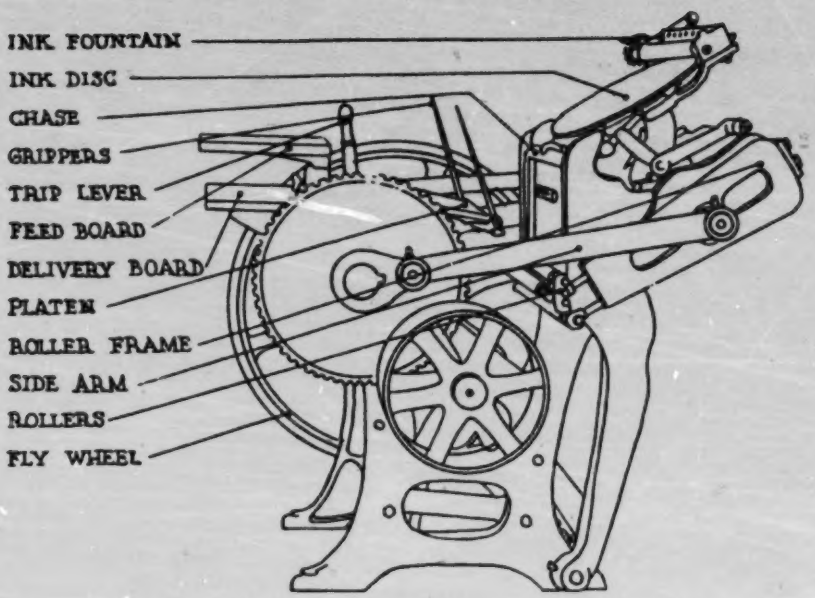
(2) "This will have to be a quick **tour** I hope you won't mind," apologized Marty. "We've got a letterpress job to finish. Two thousand **business cards** have to be printed and packed by 1:30 p.m. The **order** is for a big **account.** We try to please all **customers.** Our small accounts are just as important as the big ones. Let's get on with the tour. Have you got the diagram?"

(3) Danny was prepared. The diagram was unfolded and ready for use. Marty showed Danny how to understand it. When they stopped in a department, Marty would point to it on the diagram. He explained why the machinery, paper, and other equipment were set in certain parts of the building. It was planned to help **production** run smoothly.

(4) The tour took 10 minutes. Marty walked Danny to the employees' **exit.** He showed him where to find his **time card.** It would be placed in the rack next to the **time clock.** Marty wished Danny good luck. Danny thanked him. "I'm **punching in** at 8:30 a.m. on Tuesday," said Danny. "See you then."

(5) When Danny left the building, he was excited and happy. He also felt a little afraid. He saw Mr. Labrese waiting to drive him back to school. "Congratulations Danny," said Mr. Labrese. The grin on your face tells me you got the job. Your shop teacher, Mr. Russo, will want to hear the good news."

(6) On the way home from school, Danny talked about the job. He and his friend Bert always sat together on the bus. He told Bert it was going to be great. He would have extra money. He could begin saving for a car. He might treat a date to a movie. Maybe he could help his mother pay the bills. It was not easy for her to make ends meet since his father died. Then he thought about Jodi. Without saying a word to Bert, he wondered, "What will Jodi be like?"



PLATEN PRESS

Danny saw a large platen press like this one. Business cards were being printed with this press. Danny had used a small press of this type at school. He also printed business cards. The platen press is a **letterpress.** Do you know how letterpress differs from **offset lithography**?

MATCH THE WORDS WITH THEIR MEANING

Directions: There are three words to choose from for each meaning. Choose the correct word. Write it in the space next to the meaning. The first one has been done for you.

1. An account, a buyer (2) customer

master printer production customer

2. An expert printer, a skilled printer in business for himself (1) _____

account master printer apprentice

3. A clock, which when punched, will show the number of hours a person has worked (4)_____

time clock | business card | tour

4. A small card (usually 3" x 1½") on which is printed the name, address, phone number and salesman's name for a business (2)

apprentice | business card | time card

5. A person learning a trade from skilled workers by practical experience (1)_____

customer | account | apprentice

6. To punch a time clock (4)_____

punching in | tour | order

7. A walk around, a short trip (2)_____

tour | production | exit

8. Making something, producing, manufacturing (3)_____

punching in | production | customer

9. A card for showing the number of hours a person works (4)_____

order | apprentice | time card

10. A customer (2)_____

account | printer | exit

11. The way out; leaving a building or a room (4)_____

punching in | exit | tour

12. A paper or form which shows what a customer wants to buy (2)_____

order | apprentice | time card

WORD REVIEW

Directions: Choose from the words below to complete the sentences.

diagram **salesman** **letterpress** **appointment**

1. Mr. Labrese arranged an _____ for an interview.
2. It would be easy to find the rooms if he followed a _____
3. The business cards were printed on the _____
4. The _____ left his business card with Mr. Golden.

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. apprentice _____
2. master _____
3. business _____
4. order _____
5. account _____
6. customer _____
7. production _____
8. punching _____
9. understand _____
10. machinery _____

Arrange the above words in **ALPHABETICAL ORDER**
Write the words in the spaces below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

PHRASES

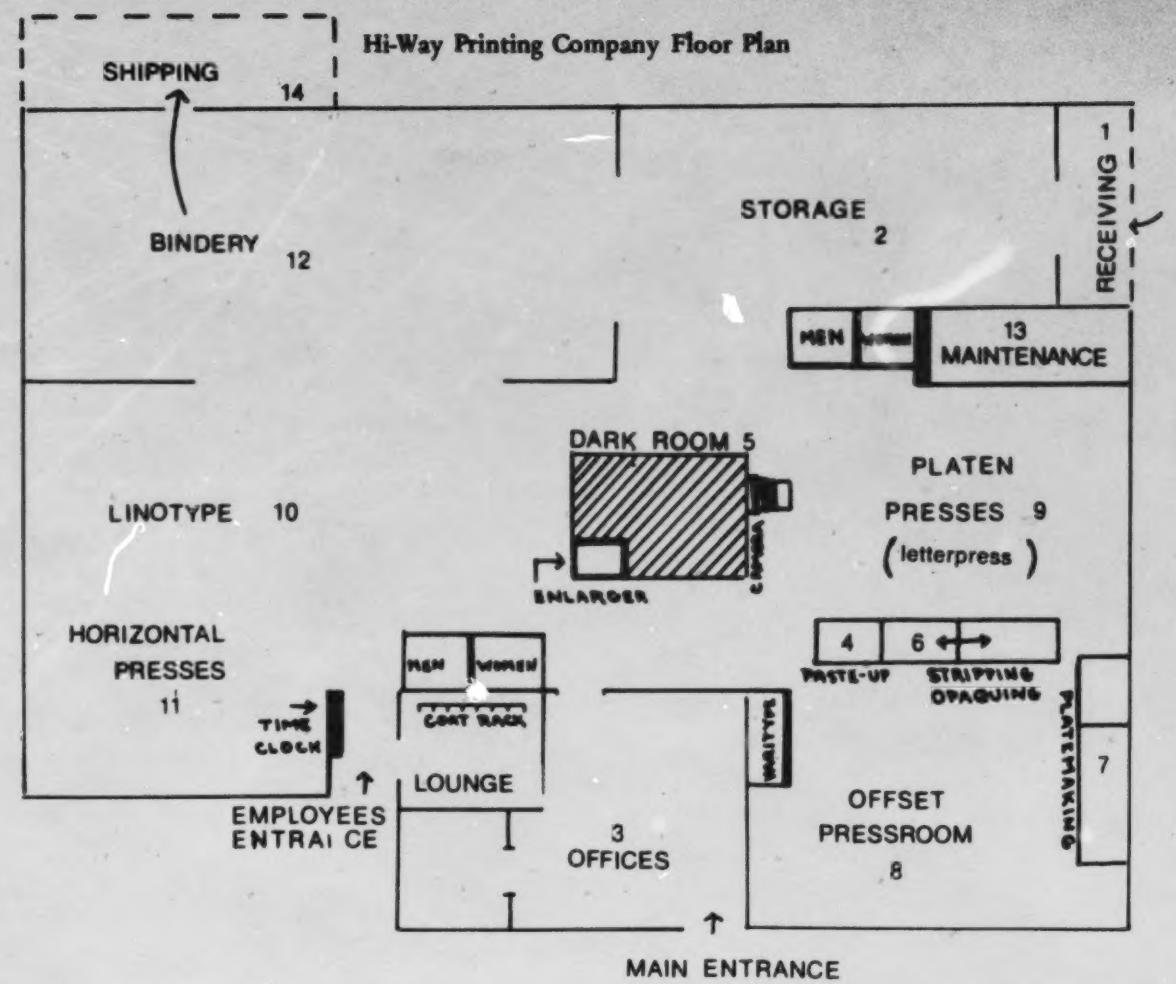
Directions: Draw a line under the phrases from Chapter 6.

1. two thousand business cards
2. a cable car ride in Kalamazoo
3. punching in at 8:30
4. joking with Mr. Del Monte
5. a master printer
6. try to please all customers

FIND THE MISSING WORDS

Directions: Find the missing words in the story. Fill in the blanks. The paragraph number is the key to the answer.

1. Two thousand _____ _____ (2) had to be printed.
2. Marty hoped to become a _____ _____ (1) like his father.
3. The different departments were set in the building to help _____ (3) run smoothly.
4. Marty is learning the printing business. He is a printer's _____ (1).
5. Hi-Way Printing tries to please all _____ (2).
6. Danny said he would be _____ _____ (4) at 8:30 on Tuesday.
7. The _____ (3) for business cards was for a big _____ (3).
8. Marty walked Danny to the employees _____ (4).
9. Danny will find his _____ _____ (4) in the rack next to the _____ _____ (4).
10. Marty said the _____ (2) would have to be quick.



Listed below are some of the equipment and supplies Danny saw in the different departments.

STORAGE

paper
ink
camera film
rubber cement
chemicals for developing and printing

DARKROOM

copy camera (rear)
enlarger
developing tank

OFFSET PRESSROOM

ATF Chief
Multilith press
AB Dick duplicator
platemaker
light table
goldenrod paper
red tape
metal ruler

LINOTYPE

Linecasting machines (hot type)

BINDERY

paper cutters
foot stapler
folder
hole puncher
stitcher
adhesive
cord
padding rack

HORIZONTAL PRESSES

Miehle No. 29 press
Kelly cylinder press

See Glossary for word definitions.

UNDERSTANDING A DIAGRAM

Directions: Refer to the Hi-Way Printing Company floor plan to answer the questions.

1. Which department is Number 1 on the diagram? _____
2. The main entrance opens into the _____
3. Name two machines Danny saw in the bindery department. _____ _____
4. Shipping is located near what department? _____
5. Which entrance is near the time clock? _____
6. Name the three presses listed under Offset Pressroom. _____ _____ _____
7. What kind of press is near the linecasting machine? _____
8. What kind of paper is listed under Offset Pressroom? _____
9. What is shown as Number 6 on the diagram? _____ _____
10. What is shown in the darkroom? See the diagram and the list to answer this question. Name two things. _____ _____
11. What kind of press is under Platen Presses? _____
12. What is listed under Storage? _____ _____ _____ _____

THE BUSINESS CARD

The order blank below was filled out before the business cards could be printed for the Dykes Lumber Company. How many cards were ordered?_____ How much was the customer charged?_____ What color ink was used?_____ What weight was the paper?_____

Hi-Way Printing Company 122 Route 17 Parma, New Jersey 262–7001				
Order No. *6170*	Date *3/15*		Due Date *3/29*	
NAME *Dykes Lumber Company*				
ADDRESS *1901 Park Avenue*				
CITY *Weehawken*	STATE *New Jersey*		PHONE *867–0391*	
PRINTING ☐ 1,000	☒ 2,000	☐ 5,000	☐ 10,000	Cards
COLOR OF INK *Black*				
PAPER WEIGHT *Medium*		PAPER COLOR *White*		
TYPE STYLE *M34*				
		TOTAL PRICE *$22.50*		

DYKES LUMBER COMPANY, INC.
1901 PARK AVENUE
WEEHAWKEN, N.J. 07087

EDWIN L. FARRELL
Sales Representative

Telephone (212) 929-3580
(201) 867-0391

FILLING OUT AN ORDER BLANK

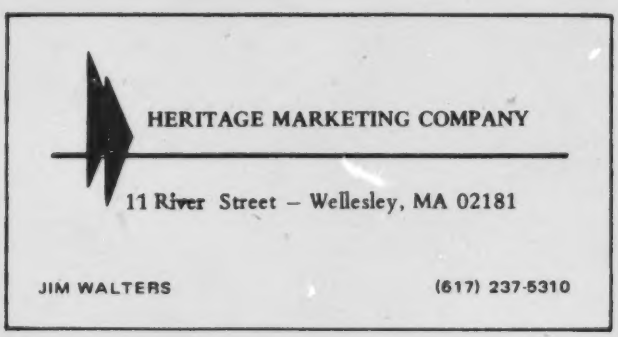
Directions Refer to the picture of the business card below to help you complete the Job Ticket.

Use the following information for completing the form.

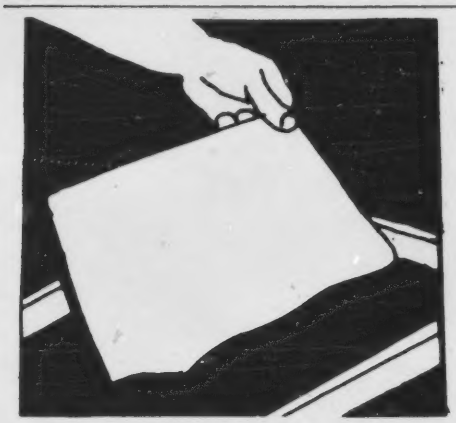
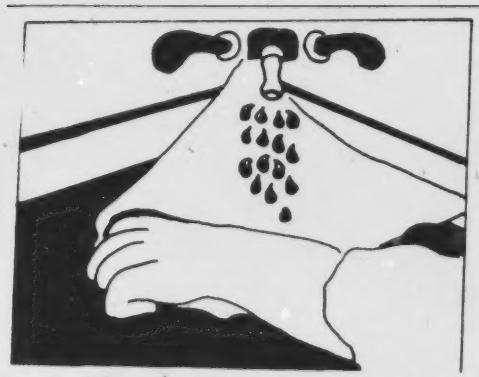
1. Number of cards ordered: 5,000 at $10.00 per 1,000; total price $50.
2. Paper weight: medium.
3. Type Style: M36.
4. Paper color: cream.
5. Color of ink: dark brown

JOB TICKET

Order No. *6270*	Date		Due Date		
NAME					
ADDRESS					
CITY	STATE		PHONE		
PRINTING	☐ 1,000	☐ 2,000	☐ 5,000	☐ 10,000	Cards
Color of ink					
Paper weight			Paper color		
Type Style					
			Total Price		



DEVELOPING THE NEGATIVE – STEP 3
in the
OFFSET LITHOGRAPHY PROCESS

What You Need	How You Use It
 1. One **tray** larger than the negative, **developer, thermometer, clock** and a **darkroom.**	a. Pour the developer into the tray. b. Dip the negative into the developer. c. Keep the negative in the developer for 3 minutes at 68 degrees. d. Remove negative and allow to drip until almost dry. This process is done in a **darkroom.**
 2. **Fixer** and another **tray.**	**SAFETY TIP** – Do not mix chemicals in a darkroom unless there is an exhaust fan in operation. Do not inhale the fumes. a. Pour the fixer into the tray. b. Dip the negative into the fixer. c. Leave it in the fixer for 5 minutes. This process is also done in the **darkroom.**
 3. **A sink** and **running water.** A sponge.	*A darkroom is not needed for this step.* a. Thoroughly rinse the negative in running water for 5 to 10 minutes. b. Sponge the negative. Hang it to dry.

SAFETY TIP – Wear rubber gloves to protect skin from chemicals.

Developing the Negative

1. What materials are needed for Step 1?_____

_____

2. Is Step 1 done in lots of light?_____

3. How large is the tray that holds the negative?_____

4. What is the recommended temperature for the developer?_____

5. In what kind of room is the fixing process done?_____

6. How many minutes must a negative remain in the fixer?_____

7. How many minutes are given to rinsing the negative?_____

8. What materials are needed for Step 2?_____

_____

9. What is done with the negative after it is rinsed?_____

_____

10. Which step need not be done in a darkroom?_____

_____

WORD FIND REVIEW

Directions: There are 21 words listed below. Find them in the puzzle. Draw a line around each word.

FOR EXTRA CREDIT: Look for other words in the puzzle. Draw a line around them. Add them to the list. Then arrange all the words in **alphabetical order**. Use the space below.

E Z N G F R O A B D F A Q P A
S M B F R E M O T S U C U R P
A A B N P O Y Q O E V C I O P
T Z E A L A R M U N I O C D O
U E S T R X A Y R D E U K U I
L E T T E R P R E S S N S C N
A L T H G O A R T V A T A T T
C O N A T B U S I N E S S I M
C T I I M P R E S S I O N O E
I D R S A L E S M E N A R N N
D M P L A C E D V W D D R A T
E A P O L O G I Z E E S T A Y
N S P U N C H Q P R O G R A M
T T C L O C K A P P L I E D E
Q E X A P P R E N T I C E O N
V R P L A T E M A K E R N A P

EMBARRASSED
DEPART
BUSINESS
LETTERPRESS
IMPRESSION
CLOCK
PLATEMAKER
PRODUCTION
APOLOGIZE
APPRENTICE
MASTER
APPLIED
APPOINTMENT
DIAGRAM
ORDER
ACCOUNT
CUSTOMER
SALESMEN
PLACED
TOUR
PUNCH

Chapter 7

"HOW DO I GET THERE?"

(1) "Now that I have a job, how do I get there?" asked Danny. "Remember, we talked about it before you **applied**," answered Mrs. Greene. "You don't own a car yet. This is one reason you applied at Hi-Way Printing. You can use **public transportation** to get there."
"That's right, now I remember, I can take a bus."

(2) "I stopped at the Safe-Line **Bus Terminal** today," said Mrs. Greene. "I asked for a **bus schedule**. Let's have a look at it."

(3) Danny looked at the schedule. He saw the tiny print. The words were crowded. There were many rows of numbers. "I'll never figure this out," complained Danny.
"It isn't easy at first," said Mrs. Greene. "Let's find when the bus **departs** and **arrives**. Draw a line under the **information**. The line makes the **timetable** easier to read. Keep the schedule with you. Your wallet is a good place to hold it."

(4) Mrs. Greene helped Danny understand the timetable. The Number 10 bus looked best. It departs at 7:55 a.m. at the corner of Main Street and Pine Street. The bus arrives at Ridge Road at 8:15 a.m. Danny would have to walk one block to Hi-Way Printing. He could easily be at work by 8:30 a.m.

(5) Danny folded the bus schedule and put it in his wallet. "I'll take a walk to the bus stop now, Mom. I want to know how many minutes the walk will take."

(6) Danny walked three blocks to Main Street. It took seven minutes. He saw the sign that said BUS STOP. There was a bench on the sidewalk. In front of the bench, the curb was painted yellow. A bus pulled over to the yellow curb. **Passengers** got on and off the bus. Danny thought, "In a few days, I'll be a passenger too."

MATCH THE WORDS WITH THEIR MEANINGS

Directions: The words in the list match the meanings below. Write the correct words in the blanks beside the meanings.

applied (1)	departs (3)
public transportation (1)	arrives (3)
bus terminal (2)	timetable (3)
bus schedule (2)	passengers (6)

1. _____ (3) leaves, goes away, opposite of arrives.
2. _____ (3) a schedule of trains or buses etc., showing the time of arrival and departure.
3. _____ (3) to come to a place, to get there; opposite of departs.
4. _____ (6) travelers in a bus, train, boat, etc.
5. _____ (1) to make application for a job.
6. _____ (2) a bus timetable.
7. _____ (1) travel for the people. A way to travel that is not private.
8. _____ (2) a bus station; either end of a bus line.

WORD REVIEW

Directions: Write a sentence for each of the words below.

1. tour 2. order 3. customer

1. _____

2. _____

3. _____

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. applied ap–plied
2. public _____
3. transportation _____
4. terminal _____
5. depart _____
6. arrive _____
7. timetable _____
8. passenger _____
9. Danny _____
10. wallet _____

Arrange the above words in **ALPHABETICAL ORDER**
Write the words in the spaces below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

MORE THAN ONE

Write the plural for each word. Use the correct word ending. For words ending in y, remember to change the y to i and add es. Add s or es to the other words.

Examples: city – cities; state – states

employee _____ office _____

press _____ process _____

company _____ production _____

duplicator _____ copy _____

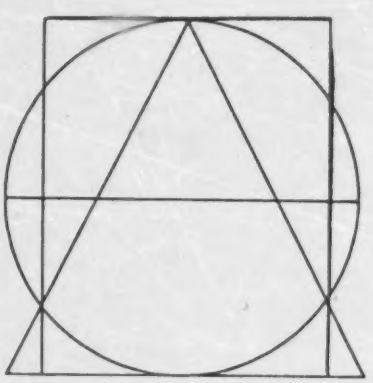
KNOWING THE FACTS

Directions: Write Yes or No after each sentence.

1. Danny can use public transportation to get to work._____
2. Danny walked 33 blocks to the bus stop._____
3. A bus schedule and a bus timetable are the same._____
4. The bus arrives at Ridge Road at 8:14 a.m._____
5. Danny folded the bus schedule and put it in his bonnet._____
6. A bus pulled over to the yellow curb._____
7. A timetable tells you when buses depart and arrive._____
8. A person who travels on a bus is called a passenger._____
9. Traveling by bus is private transportation._____
10. Danny applied for a job at Hi-Way Printing because he could use public transportation to get to work. _____

OUT-OF-SIGHT LETTERS

Hidden in these lines are 20 letters. Find them and list them in the numbered blanks.



1. _____	6. _____	11. _____	16. _____
2. _____	7. _____	12. _____	17. _____
3. _____	8. _____	13. _____	18. _____
4. _____	9. _____	14. _____	19. _____
5. _____	10. _____	15. _____	20. _____

BUS SCHEDULE

Directions: Refer to the timetable to answer the questions below.

SAFE LINE	RUMSEY – PARMA Timetable				
Bus Numbers	4	6	18	10	22
	A. M. Daily	A. M. Daily	A. M. Sun. Hol.	A. M. Daily	A. M. Daily
Rumsey	6:49	7:19	7:45	7:49	8:19
Glenwood	6:55	7:25		7:55	8:25
Allenville	7:01	7:31	Express	8:01	8:31
Walden	7:06	7:36		8:06	8:36
Hokus	7:11	7:41		8:11	8:41
Ridge Rd. Parma	7:15	7:45		8:15	8:45
Parma Terminal Rte. 17	7:19	7:49	8:15	8:19	8:49

Hol. – Holiday

1. What time does the Number 10 bus stop in Rumsey?_____
2. What is the next stop after Rumsey on the Number 10 bus?_____
3. The express bus is Number _____? On what days does it run?_____
4. If Danny took the Number 22 bus to work, what time would he get to Ridge Road? _____ Would he get to work on time? _____
5. What time does the Number 6 bus arrive at the Parma Terminal?_____
6. The Number 4 bus arrives in Waldon at _____ A.M.

See if you can understand these schedules. Which buses go from Mahwah to Paramus? Which buses go from Paramus to Ramsey?

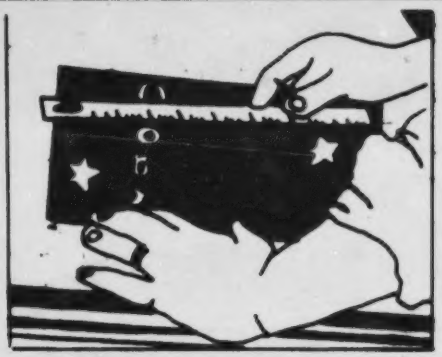
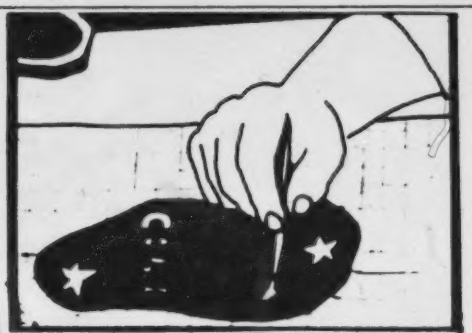
OAKLAND–FRANKLIN LAKES–WYCKOFF–NEW YORK
MAHWAH–FARDALE–RAMSEY–NEW YORK Via North Central Avenue
Daily except Saturdays, Sundays and Holidays

TABLE NO. 10 6-30-75	526 AM	530 AM	350 AM	502 AM	352 AM	504 AM	505 AM	508 AM	354 AM	510 AM	356 AM	528 AM
Mahwah, W. Airmount Rd. & Island Rd.	Lv			6 30		6 54			7 10		7 30	
Ramsey, W. Main St. & N. Cent. Ave., N.J.	"			6 34		6 54			7 14		7 34	
Fardale, Forest Road, Mahwah, N.J.	"			6 40		7 00			7 20		7 40	
Mahwah Jct. Routes 17 & 202, N.J.	"	6 44	6 15				6 45	7 00				7 33
Deerhaven, Route 202, Mahwah, N.J.	"	6 51	6 20				6 50	7 05				7 38
Minnehaha Blvd. & Seneca Ave., Oak., N.J.	"	↓	↓		6 51		↓	↓		7 23		↓
Hiawatha Blvd. & F k'n Ave., Oak., N.J.	"				6 56		6 59	7 14				7 47
Sioux Ave. & Rte. 202, Oakland, N.J.	"	6 01	6 29				7 02	7 17				7 50
Lk. Shore Dr. & Powder Mill L., Oak., N.J.	"	6 04	6 32				7 05	7 20				7 53
OAKLAND, R.R. Sta., Rte. 202, N.J.	"	6 04	6 35									7 53
Colonial Rd. & Rte. 208, Fr. Lks., N.J.	"	6 11	6 39									7 57
Franklin Lakes, Franklin Ave., N.J.	"	6 14	6 40		7 02		7 09			7 29		7 58
Wyckoff, Franklin & Wyckoff Ave., N.J.	"	6 14	6 45	6 43	7 07	7 03	7 14		7 23	7 34	7 43	8 03
Wyckoff, Russell & Wyckoff Ave., N.J.	"		6 47		7 09		7 16			7 36		
Wyckoff, Grandview & Wyckoff Ave., N.J.	"		6 51		7 13		7 20			7 40		
Wyckoff, Grandview Ave. & Route 208, N.J.	"		6 52		7 14		7 21			7 41		
Wyckoff, Franklin & Goshen Ave., N.J.	"	6 21	↓	6 45		7 05	↓		7 29	↓	7 45	8 05
WALDWICK, Crescent Ave., N.J.	"	6 23	Exp. via 208	6 50		7 10	Exp. via 208		7 30	Exp. via 208	7 50	8 10
Waldwick, F k'n Tpk. & Wyckoff Ave., N.J.	"	6 28		6 54		7 14			7 34		7 54	8 14
Hohokus, Franklin Tpk., N.J.	"	6 32		6 57		7 17			7 37		7 57	8 17
Ridgewood Ave., Route 17, N.J.	"	6 42		7 05		7 25			7 45		8 05	8 25
PARAMUS, Route 17, N.J.	"	6 44		7 10		7 30			7 50		8 10	8 30
PORT AUTHORITY BUS TERMINAL												
41st St. & 8th Ave., N.Y.C.	Ar	7 10	7 35	7 40	7 58	8 00	8 00	8 15	8 15	8 25	8 30	8 45	9 05

NEW YORK–WYCKOFF–FRANKLIN LAKES–OAKLAND
NEW YORK–RAMSEY–FARDALE–MAHWAH Via North Central Avenue
Daily except Saturdays, Sundays and Holidays

TABLE NO. 4 6-30-75	625 PM	527 PM	501 PM	351 PM	503 PM	505 PM	507 PM	353 PM	509 PM	355 PM	511 PM	529 PM
PORT AUTHORITY BUS TERMINAL												
41st St. & 8th Ave., N.Y.C.	Lv	3 45	4 35	5 00	5 10	5 15	5 25	5 30	5 30	5 48	5 50	6 10	7 15
PARAMUS, Route 17, N.J.	Ar	4 10	5 00		5 35				5 55		6 15		7 40
Ridgewood Ave., Route 17, N.J.	"	4 15	5 05		5 40				6 00		6 20		7 44
Hohokus, Franklin Tpk., N.J.	"	4 23	5 12		5 50				6 10		6 30		7 52
Waldwick, F k'n Tpk. & Wyckoff Ave., N.J.	"	4 26	5 15		5 55				6 15		6 35		7 55
WALDWICK, Crescent Ave., N.J.	"	4 31	5 21		6 00				6 20		6 40		8 01
Wyckoff, Franklin & Goshen Ave., N.J.	"	4 35	5 25		6 05				6 25		6 45		8 06
Wyckoff, Grandview Ave. & Route 208, N.J.	"	↓	↓	5 45	↓	6 00		6 15	↓	6 33	↓	6 55	↓
Wyckoff, Grandview & Wyckoff Ave., N.J.	"			5 46		6 01		6 16		6 34		6 56	
Wyckoff, Russell & Wyckoff Ave., N.J.	"			5 48		6 04		6 18		6 36		6 58	
Wyckoff, Franklin & Wyckoff Ave., N.J.	"	4 37	5 27	5 50	6 07	6 05		6 20	6 27	6 38	6 47	7 00	8 08
Franklin Lakes, Franklin Ave., N.J.	"	4 40	5 30	5 55		6 10		6 25		6 43		7 05	8 11
Allen Ave. & Franklin Ave., Oakland, N.J.	"	4 43	5 32	5 57		6 12		6 27		6 45		7 07	8 13
Shirley St. & Route 208, Oakland, N.J.	"	4 45	5 34	5 59		6 14		6 29		6 47		7 09	8 15
OAKLAND, R.R. Sta., Route 202, N.J.	"	4 50	5 38	6 03		6 18	6 28	6 33		6 51		7 13	8 19
Powder Mill L. & Lake Shore Dr., Oak., N.J.	"		5 40	6 05		6 20	6 30	6 35		6 53		7 15	8 21
Sioux Ave. & Route 202, Oakland, N.J.	"		5 43	6 08		6 23	6 33	6 38		6 56		7 18	8 24
Deerhaven, Route 202, Mahwah, N.J.	"		5 51	6 16		6 31	6 37	6 46		7 04		7 26	8 30
Mahwah Jct. Routes 17 & 202, N.J.	"		5 55	6 20		6 35		6 50		7 08		7 30	8 35
Fardale, Forest Road, Mahwah, N.J.	"				6 14			6 34			6 54		
Ramsey, W. Main St. & N. Cent. Ave., N.J.	"				6 20			6 40			7 00		
Mahwah, W. Airmount Rd. & Island Rd.	Ar				6 25			6 45			7 05		
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

STRIPPING AND OPAQUING – STEP 4
in the
OFFSET LITHOGRAPHY PROCESS

What You Need	How You Use It
 1. Light table, goldenrod paper, negative, T-square, tape.	a. Place goldenrod paper on the light table. Square the paper with the straight edges. Tape the goldenrod to the table. b. With the emulsion (dull) side up, place the negative on the goldenrod. Use a T-square for correct positioning. c. Tape the negative to the goldenrod. **You now have a flat.**
 2. A flat, Exacto knife or a single edge razor blade.	a. Turn the flat over. Carefully cut away the goldenrod paper allowing the negative to show. Only the area to be printed should show. b. Take care not to cut through the negative. **You now have a stripped flat.** SAFETY TIP – When cutting, keep fingers away from the blade.
 3. Opaque paint, a small pointed paint brush.	To opaque the negative a. Use opaque paint and a brush to paint out scratches and unwanted areas on the negative. b. It is now ready for the "burning-in" step.

STRIPPING AND OPAQUING

1. What materials are needed for Step 1?_____
2. Which side of the negative is facing up when attached to the goldenrod paper? (1b.)

   _____
3. What is used to cut the goldenrod paper?_____
4. Does a flat hold a negative in the proper position for making a plate?_____
5. An Exacto knife or razor blade should cut through the negative. Answer yes or no.

   _____
6. What kind of paint is used to fill up little holes or scratches in a negative?_____
7. The flat gets burned into the (3b.)_____
8. Check the position of the negative with a (lb.)_____
9. When cutting, keep fingers away from the (2)_____

Chapter 8

SOME GOOD ADVICE

(1) The bell rang at 8:30 a.m. The school doors opened, and Danny entered the building with a crowd of students. Mr. Del Monte, the principal, saw Danny. He greeted him with a big smile and said, "Congratulations Danny! I heard you got the job." Mr. Del Monte gave Danny a friendly handshake.

(2) When the homeroom period ended, Danny went to his shop class. He went straight to his teacher. "Mr. Russo, I've got a problem," said Danny."I begin my new job on Tuesday. Mr. Golden is starting me on paste-ups. I want to make a good **impression**. But pasting up copy has never been my 'thing.' What am I going to do?"

(3) "I wouldn't worry," said Mr. Russo. You may not be great with paste-ups. But you have a good idea of what it's all about. I know Mr. Golden. I know how he **breaks in** beginners. You are in a work-study **program**. You aren't expected to be a master yet. You have two school days before Tuesday. You can use them to review what you have learned. You'll feel more confident if you review."

(4) "I'm going to goof, I know. I wish Mr. Golden would start me on **platemaking**. Platemaking is my thing," said Danny. "I'll tell him on Tuesday, right after I punch in."

(5) "You'll have to understand this," said Mr. Russo. "When you are employed, you are not the boss. The boss runs his business in his own way. He wants to start you on paste-ups, so that's what you'll do. Okay? We know you're a good platemaker. Mr. Golden will find out. But he'll find out in his own way."

(6) Danny knew he could trust Mr. Russo. He never pulled any punches. You didn't have to guess what he was trying to tell you. At first, Danny thought Mr. Russo was hard on his students. When he got to know him, Danny liked and **respected** him.

(7) "I understand what you are saying," said Danny. "I might not have given a good impression of myself. Thanks for the good **advice**, Mr. Russo."
"Anytime, Danny. Here is a paste-up job for you. It's for our yearbook. You can start reviewing now."

Flip Top Platemaker

MATCH THE WORDS WITH THEIR MEANINGS

Directions: The words in the list match the meanings below. Write the correct words in the blanks next to the meanings.

impression (1)	platemaking (3)	respected (6)
program (2)	break in (2)	advice (7)

1. _____ (2) to train someone for work.

2. _____ (1) 1. What others think of you. 2. a printed copy. (see glossary)

3. _____ (6) Looked up to, or honored.

4. _____ (3) in offset printing, making a zinc or aluminum lithographic printing plate by a process called burning.

5. _____ (7) an opinion about what should be done.

6. _____ (2) a plan of what is to be done.

WORD REVIEW

Synonyms are words having nearly the same meaning.

Directions: Complete each sentence. Fill in each blank with a word you can use **in place of** the underlined word. Choose from the words below. One word does not belong.

timetable **terminal** **departs** **passengers** **advice**

1. The bus _____ (leaves) at 7:20 a.m.
2. Danny looked at _____ (schedule) to find out when the bus would depart.
3. Danny will join the other _____ (travelers) on the bus.
4. Mrs. Greene got the timetable at the bus _____ (station).

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. impression _____
2. program _____
3. platemaking _____
4. respected _____
5. advice _____
6. Marty _____
7. review _____
8. students _____
9. yearbook _____
10. teacher _____

Arrange the above words in **ALPHABETICAL ORDER**
Write the words in the spaces below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

OPPOSITES

An antonym is a word that means the opposite of another word.

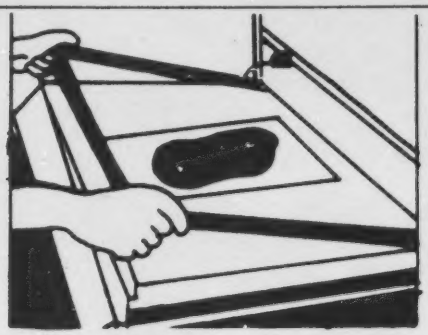
Directions: Look at the words in the numbered list. Write in the **opposite** for each word. Choose from this group of words.

arrive **public** **loose** **confident** **depart** **hire**

1. firm _____
2. leave _____
3. fire _____
4. private _____
5. unsure _____
6. get there _____

BURNING A PLATE – STEP 5
in the
OFFSET LITHOGRAPHY PROCESS

An offset plate has an **emulsion** on it. The emulsion is sensitive to light. When a special kind of light passes through the negative on the flat, the emulsion hardens. A picture of what is to be printed is now on the plate. When the plate is developed, the emulsion, which has not been exposed to the light, is sponged off.

What You Need	How You Use It
1. A **Plate Maker** and a **Photosensitive Plate** usually made of aluminum.	a. Place the flat on the sensitized plate with emulsion side up. b. The flat must cover the entire plate.
 2. A Vacuum Frame	a. Place the flat and plate on the vacuum frame. b. Close the glass over the frame. c. Be sure the flat is in perfect position. d. Set the vacuum pressure at 25 to 30 pounds.
 3. **Carbon Arc Light** or a **No. 1 Photoflood Lamp.** This will depend on the type of plate maker being used.	a. Turn on the light. Expose the plate to the light. b. With No. 1 photoflood, expose for 8 minutes. c. With carbon arc, expose for 2 minutes. WARNING: Do not look at the carbon arc light when it is burning. It will damage your eyes.

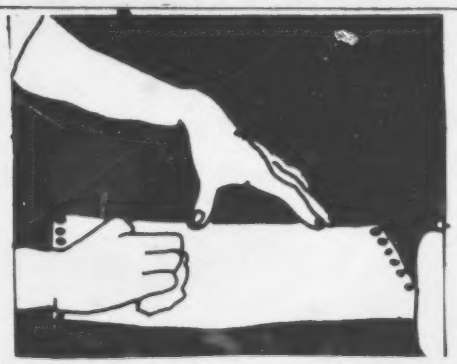
BURNING A PLATE

Some types of offset plates are **presensitized**. This means that the emulsion has been applied by the plate manufacturer. Plates made of aluminum are widely used. Plates are also made of plastic, paper, zinc, steel, and a mixture of metals.

Answer the following q uestions:

1. What kind of machine is used to burn a plate?_____ _____
2. What is the flat placed on? (1a.)_____
3. Is the emulsion side up?(1a.)_____
4. What are sensitized plates often made of? (1)_____
5. The flat and plate are placed on the (2a.)_____ _____
6. What closes over the frame?_____
7. How many pounds of pressure are needed to hold the plate in position? (2d.)_____
8. Name two kinds of lights used for burning a plate. (3)_____
9. How many minutes should the negative be exposed when using a No. 1 photoflood light?_____
10. How many minutes should the negative be exposed when using a carbon arc light?_____ Should you look at the light?_____

DEVELOPING A PLATE – STEP 6
in the
OFFSET LITHOGRAPHY PROCESS

What You Need	How You Use It
1. Gum Arabic Solution, Sponge	a. Place plate on a clean dry surface. b. Pour a small amount of gum arabic on the plate. c. Spread the solution over the entire plate with a sponge. d. Remove excess gum. Leave a thin coat on the plate.
2. Developer and another Sponge, Gum Arabic Solution.	Before the gum dries: a. Pour about a teaspoon of the developer on the plate. b. Use a clean sponge to rub the developer into the plate. Do so in a circular motion. c. Rub until a clear image (picture) appears. Add a little gum if the developer begins to dry.
 3. Water and a Soft Clean Cloth, Gum Arabic Solution, Sink	SAFETY TIP – If skin is sensitive, wear rubber gloves. Label all containers holding chemicals. a. Wash the plate with luke warm water. b. Sponge off excess water. c. Apply gum again. d. Polish it dry with a clean soft cloth. For small plates less than 14" X 20" it is not necessary to wash the plate before applying the gum.

DEVELOPING A PLATE

Answer the following questions:

1. Should a large amount of gum arabic be poured on the plate? (1b.)_____
2. What is used to spread the gum arabic solution evenly over the plate? (1c.)_____
   _____
3. A thick coat of gum arabic must remain on the plate. Answer yes or no. (1d.)_____
4. Use a circular motion to rub the developer into the plate. Answer yes or no. (2b.)
   _____
5. What is added if the developer begins to dry before you have finished using it? (2c.)
   _____
6. About how much developer is needed? (2a.)_____
7. What is used to wash the plate? (3)_____
8. What is used to make the image appear (2)_____
9. Is a sponge used to polish the plate until it is dry?_____
10. In this process we begin and end using the same liquid. What is the name of it?
    _____

MATCH THE EXPRESSIONS

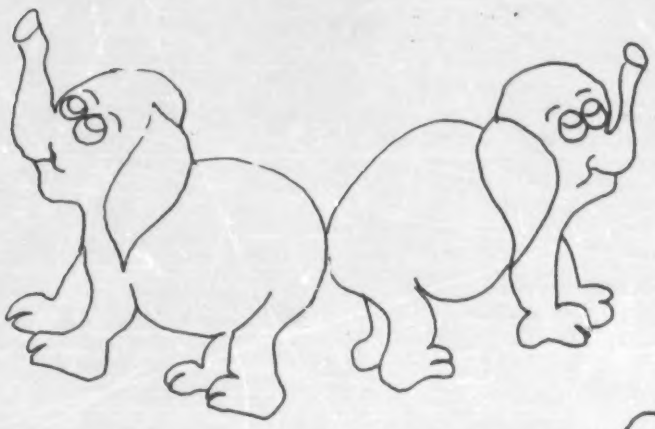
Directions: Fill in the number of the picture that matches the **expression.**

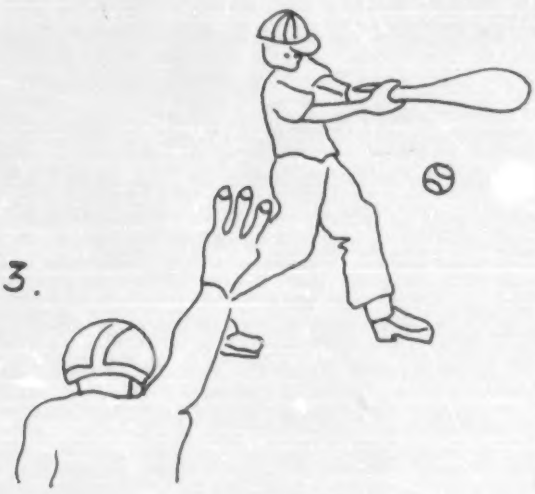
"I'm worried about striking out in an interview."_____

"See you later, squirts."_____

He never pulls any punches._____

It wasn't easy to make ends meet._____





DANNY MEETS THE CREW

(1) "So far, so good," thought Danny. He had gotten to work on time. He found his time card, and he punched in. Then he went to the offset lithography department.

(2) Danny looked around. Everyone was busy. The presses began to roll. Danny liked the familiar sound. He also knew the sound of the **VariTyper**. He heard sound coming from other rooms. He could hear the **folding machine** and the **foot stapler**. Someone had begun **operating** the **hole puncher**. These machines are in the **bindery room**. Danny thought, "The printing business is exciting."

(3) Danny wanted to be busy too. He was getting a little nervous. When would he get started? Then he noticed a pretty girl with long dark hair. She walked up to him and said, "Good morning! You must be Danny. I'm Jodi. Mr. Golden told me to expect you. I guess you know you're doing paste-ups today. We'll be working together. We've got a busy day ahead. But we can take time out to meet the **crew**."

(4) Danny was introduced to Bill, the **cameraman**. Sue was seated at the **light table**. Her job is **stripping** and **opaquing** the **negatives**. Tim was the man Danny was eager to meet. He is the platemaker. He met Joe and Sal. They do the **presswork**.

(5) Danny knew he learned a lot at school. He wanted to get started. He also knew he was still having problems with paste-ups. Then he thought, "I may have problems, but this should be an interesting day. Jodi is even prettier than I imagined."

MATCH THE WORDS WITH THEIR MEANINGS

Directions: There are three words to choose from for each meaning. Choose the **correct word**. Write it in the space next to the meaning. You can refer to the **glossary** for this activity.

1. A photographer (4)_____

   negatives **operating** **cameraman**

2. A composing machine for setting cold type in many typefaces (2)_____

   foot stapler **VariTyper** **presswork**

3. Laying out the negatives on goldenrod paper according to the way it is to be printed (4)_____

light table cameraman stripping

4. A machine on a stand which staples when pressing a foot pedal. (2)_____

foot stapler folding machine VariTyper

5. A group of people working together. (3)_____

crew opaquing operating

6. Painting out unwanted spots on a negative. (4)_____

presswork opaquing stripping

7. A machine for folding paper. (2)_____

light table foot stapler folding machine

8. Light and dark reversed on film. (4)_____

negative presswork crew

9. A layout table with a glass top under which a light is placed. (4)_____

operating light table cameraman

10. A place where printed material is put together with adhesive, staples, thread, etc. (2) _____

bindery room opaquing VariTyper

11. Work produced on a printing press. (4)_____

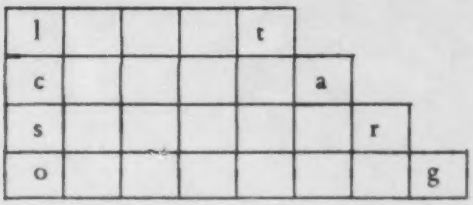
stripping presswork negative

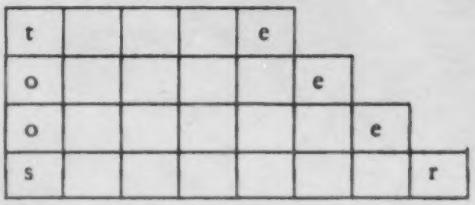
12. Running a machine. (2)_____

operating crew stripping

SPELLING STAIRWAYS

Directions: Spell out the words in the squares. Choose from the words below. Two of the words under each puzzle will not fit.





1. arrive light opaquing
   stapler camera negative

2. crew stripper operate
   table presswork opaque

SPLITTING WORDS

Directions: Divide the words into syllables. Use the **dictionary** for this activity.

1. VariTyper _____
2. folding _____
3. stapler _____
4. bindery _____
5. operating _____
6. cameraman _____
7. table _____
8. stripping _____
9. opaquing _____
10. negative _____
11. presswork _____
12. interesting _____

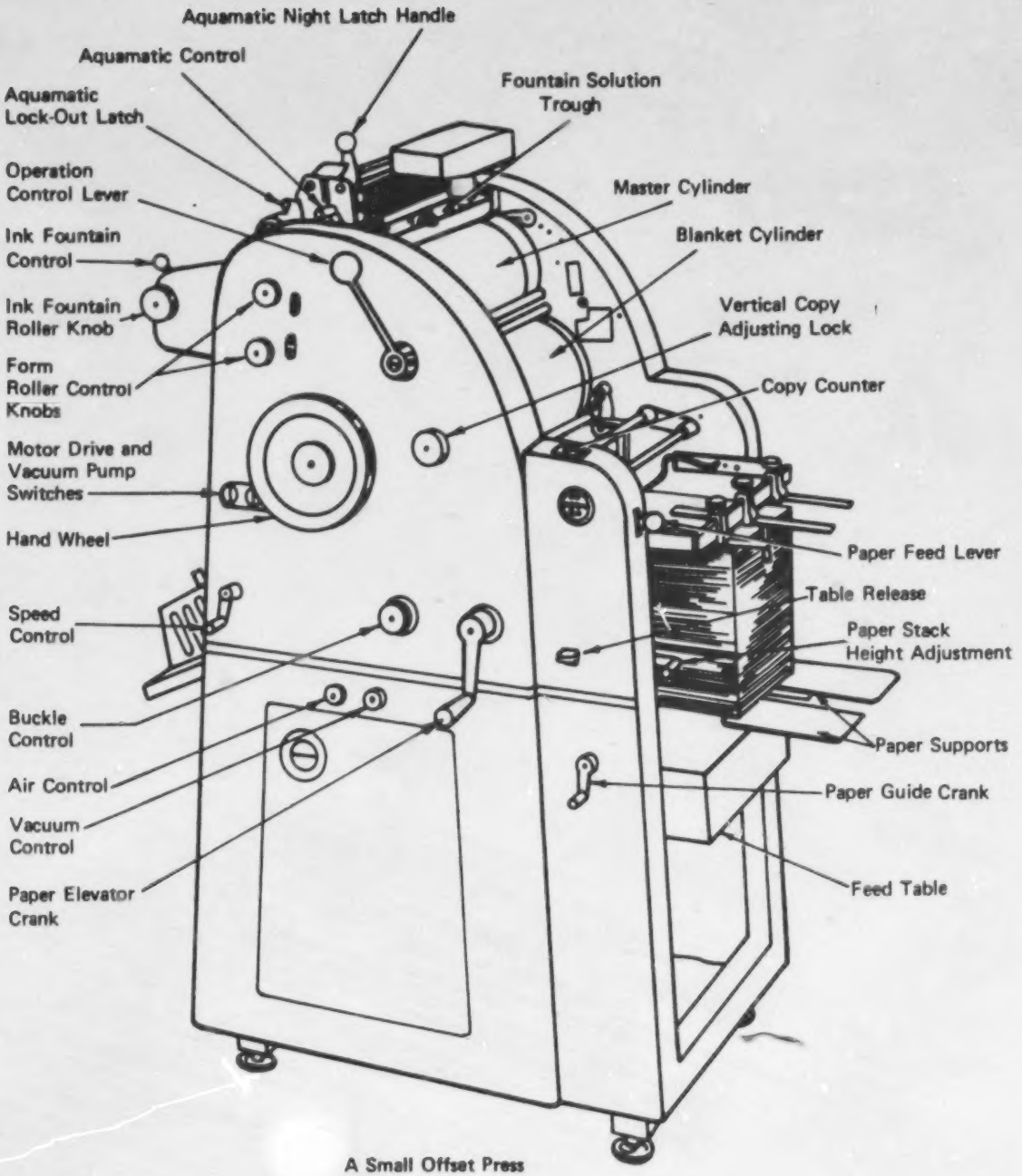
Arrange the above words in **ALPHABETICAL ORDER**
Write in the spaces below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

FIND IT IN THE GLOSSARY

Look up the words **hole puncher** in the glossary. Write the meaning in the space below.

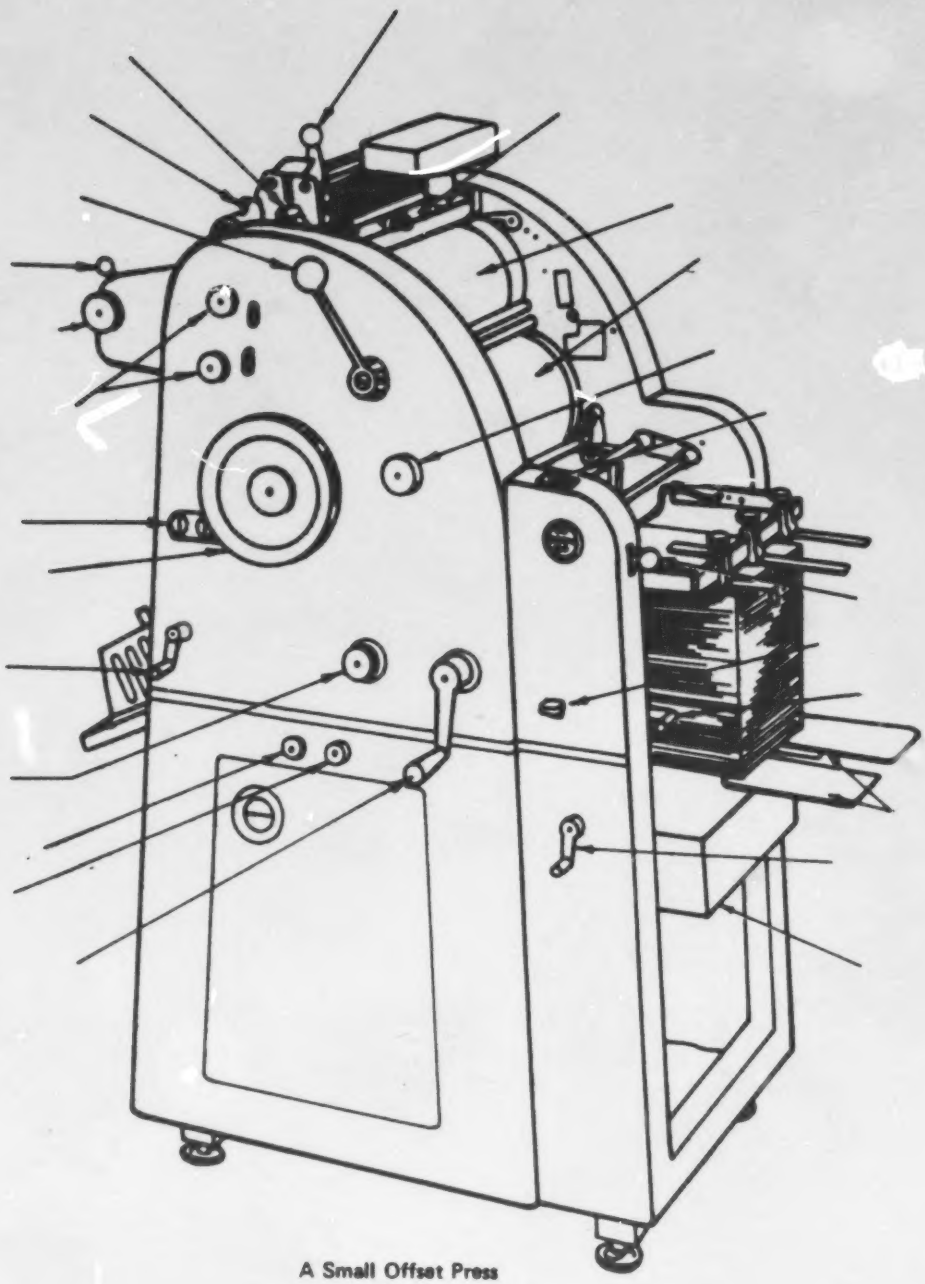
_____



A Small Offset Press

74

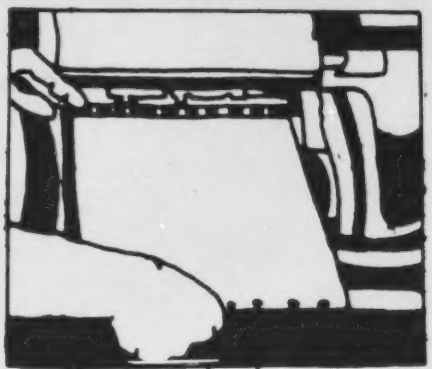
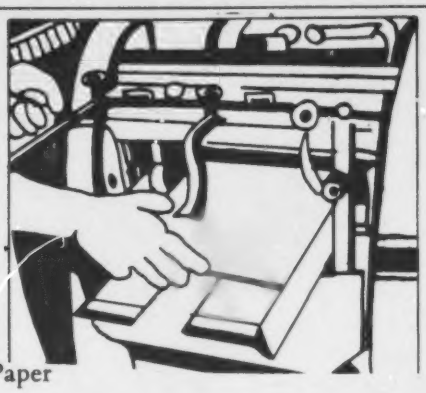
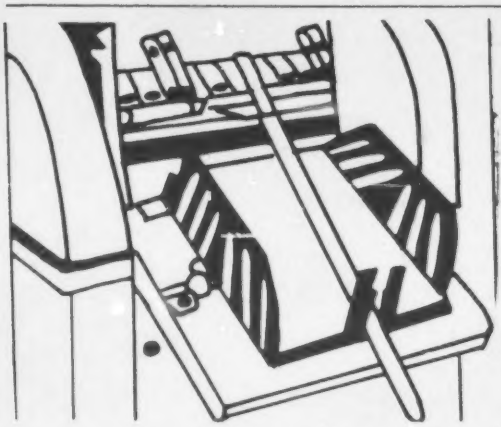
Directions: Label the Parts.



A Small Offset Press

PRINTING FROM A PLATE – STEP 7
in the
OFFSET LITHOGRAPHY PROCESS

The offset lithography process is based on the principle that **water and grease do not mix.** Before a plate is used for printing, it is made wet and then it is inked. The ink sticks only to the parts of the plate with the burned in picture. An offset press has two fountains, one for inking the plate and one for the water solution.

What You Need	How You Use It
 1. An Offset Press, the Plate, Fountain Solution, Ink	a. Wet the plate with primary solution. b. Place the plate on the plate cylinder of the press. c. Mix the fountain solution. Pour it in the fountain. d. Run the press until the dampening rollers are wet. e. Pour the ink in the ink fountain. f. Ink flow is regulated with the ink adjusting screws.
 2. Paper	SAFETY TIP Keep fingers away from moving rollers. a. Set the feeder for the size of paper (stock). b. Test by running some blank sheets through the machine. c. Start the press. Turn on the fountain solution and ink rollers. Set the impression lever.
 3. Gum Arabic, Cleaning Solution, Sponge	SAFETY TIP Never clean a press in motion without supervision. a. Check for quality of printing. b. Keep the proper balance of ink and water. c. If too light, use less water. If too dark, use less ink. d. Complete the **run.** Carefully remove the freshly printed stock. e. Remove the plate. Coat it with light gum arabic solution. f. Wash the cylinders and rollers. Empty and wash the fountains.

PRINTING FROM A PLATE

Directions: Draw a line under the correct answer for each question:

1. The offset lithography process is based on the principle that
   a. water and grease will mix.
   b. ink and water will mix.
   c. water and grease do not mix.

2. An offset press has two fountains,
   a. one for cleaning the plate, the other is for the solution.
   b. one is for inking the plate, the other is for the solution.
   c. one for wetting the paper, one for inking the feeder.

3. The ink flow is regulated with the
   a. plate cleaning fluid.
   b. ink adjusting screws.
   c. dampening rollers.

4. The ink is poured into the
   a. well.
   b. primary solution
   c. ink fountain.

5. Another word for paper is
   a. stock.
   b. fountain.
   c. press.

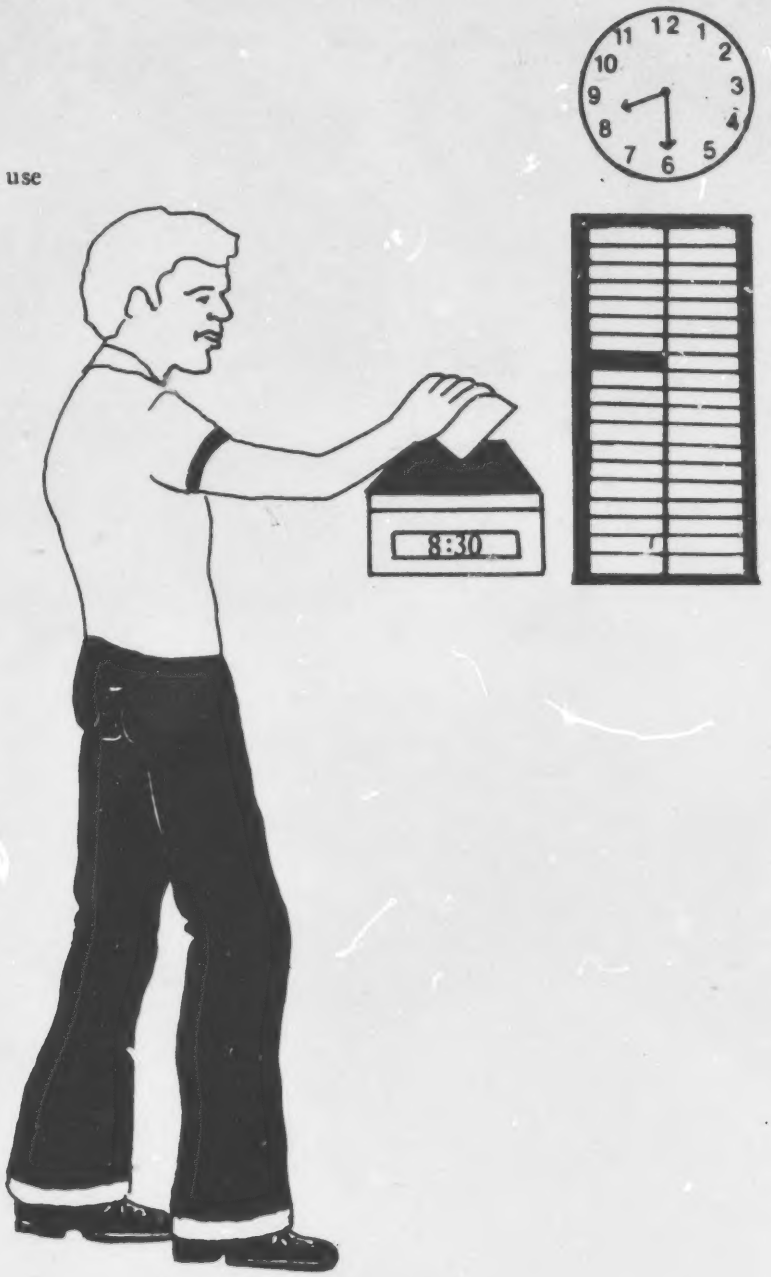
6. Set the feeder for the
   a. size of the cylinder.
   b. size of the paper.
   c. for the birds.

7. Keep the proper balance of
   a. gum arabic and cleaning solution.
   b. ink and gum arabic.
   c. ink and water.

8. The sponge is used to clean the
   a. cylinders and rollers.
   b. the stock.
   c. the ink.

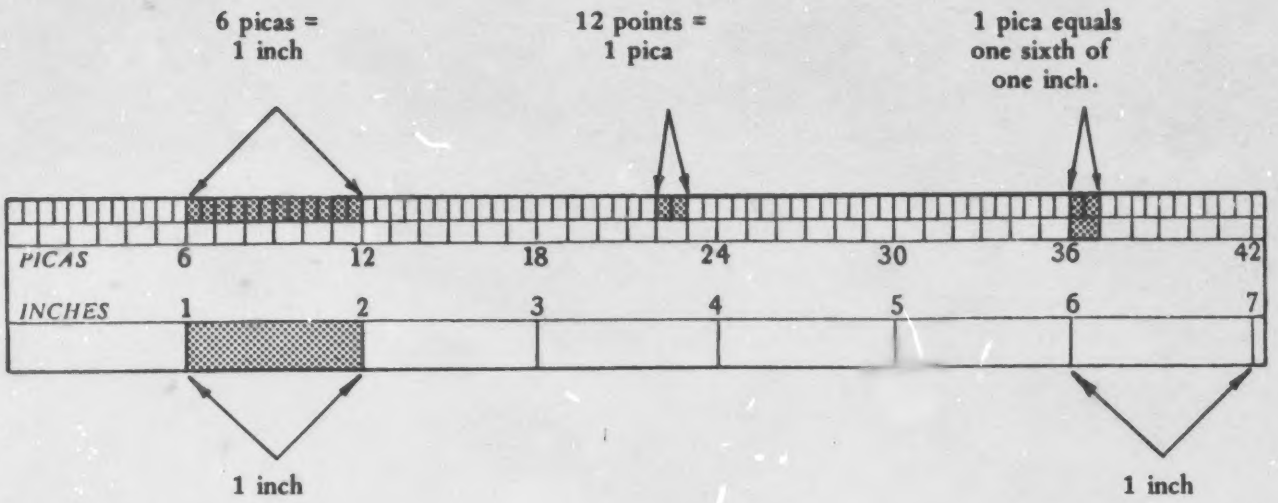
9. If the print is too light, use
   a. more water.
   b. less water.
   c. less ink.

10. If the print is too dark, use
   a. less ink.
   b. more ink.
   c. less water.



MEASUREMENT FOR PRINTERS

The Pica Ruler



Directions: Use the scale above to answer the questions below.

1. How many picas are in 1 inch? _____ How many picas in two inches? _____
   How many picas in 7 inches? _____

2. How many points are in 1 pica? _____

3. If you had to set a line of type 3 inches wide, how many picas would that be equal to?
   _____

4. How many inches are on this ruler? _____ How many picas are on this ruler?
   _____

5. How many picas to ½ inch? _____

6. If you had to set a line of type 12 picas wide, how many inches would that equal?
   _____

7. 2 picas equal _____ points.

WORD FIND REVIEW

Directions: There are 21 words listed below. Find them in the puzzle. Draw a line around each word.

FOR EXTRA CREDIT: Look for other words in the puzzle. Draw a line around them. Add them to the list. Then arrange all the words in **alphabetical order.** Use the space below.

T S C H E D U L E G D Z B E E
E P A S S E N G E R E B U S T
R I P P A S T E U P P A R T R
M A K E U P R O G R A M N A A
I H I R E I B N X A R T U R N
N O P A Q U I N G S T O R E S
A V I D S P N X R E V I E W P
L A Z V P E D R A R R I V E O
A R W I T N E A S T A P L E R
F I R C E P R E S S W O R K T
T T I E I E Y E A R B O O K A
S Y T I M P R E S S I O N Q T
O P E A W T I M E T A B L E I
V E C L I T H O G R A P H Y O
C R E W T S C H E D U L E E N

OPAQUING
STRIPPING
BINDERY
CAMERA
NEGATIVE
PASTE-UP
LITHOGRAPHY
PRESSWORK
VARITYPER
STAPLER
ARRIVE
DEPART
ADVICE
REVIEW
IMPRESSION
TIMETABLE
SCHEDULE
CREW
YEARBOOK
PASSENGER
TRANSPORTATION

GLOSSARY OF PRINTING AND BUSINESS TERMS

account (ak kount) – a customer, a record of what is bought by a customer.

adhesive (ad HE siv) – a sticky substance, a type of glue.

aperture (AP er chur) – the lens opening through which light enters the camera.

applicant (AP li kant) – one who applies for something such as a job.

appointment (ap POINT ment) – setting a date to meet someone.

apprentice (ap PREN tiss) – a person learning a trade, one who may work without pay while learning a trade.

art board (ART BORD) – illustration board, paper board on which the paste-up is done.

Art Type (ART TIPE) – a trade name for acetate lettering or shading, a form of cold type.

ATF Chief (A-T-F CHEEF) – trade name for an offset press distributed by American Type Founders.

bed (BED) – the flat part of a letterpress on which the type form rests.

bellows (BELL ohz) – a flexible enclosure which is light tight. It connects the lensboard and the camera back.

bindery (BINE der ee) – a place where books and pamphlets are put together.

blanket (BLANG ket) – fabric backed rubber sheet which is wrapped around the impression cylinder on the offset press.

blow up (BLOH UP) – to enlarge a photograph.

bristol board (BRISS tull BORD) – a lightweight cardboard used for illustrations and layouts.

brochure (bro SHURE) – a pamphlet or booklet.

burning a plate (BURN ing a PLAYT) – to print (expose) a photolithographic plate under bright light in a vacuum frame (platemaker).

business card (BIZ niss KARD) – a small card, (usually 3" x 1½") on which is printed the name, address, phone number and salesman's name for a business.

bus schedule (BUSS SKED jool) – a timetable showing when busses arrive and depart.

carbon arc light (KAR bun ARK LITE) – a lamp containing carbon rods that produce arced light in the platemaker.

cold type (KOLD TIPE) – setting type by using a composing machine such as a VariTyper, or with the use of Art Type, transfer type or any method other than the hot type method.

company (KUM puh nee) – a place of business.

composing machine (kum POHZ ing Muh SHEEN) – a machine for setting type; e.g., VariTyper.

cooperative (koh OP er uh tiv) – willing to work together with others.

Cooperative Industrial Education Coordinator –The person who is in charge of the work-study program in a school (see work-study program).

coordinator (koh OR di nay ter) – in a school, one who brings together different departments so they may work well together.

copy (KOP ee) – the lettering and pictures used in the paste-up and made ready for photographing, e.g., camera ready copy.

copy board (KOP ee bord) – the part of the copy camera on which the copy is placed for photographing.

copy camera KOP ee KAM ruh) – also called process camera; a large camera used for offset photography, one end of which is in a darkroom, in horizontal type.

crew (KROO) – a group of people working together.

customer (KUS tuh mer) – an account or buyer.

dampening roller (DAM pen ing ROH ler) – the roller that puts the wetting solution on the printing plate on an offset lithographic press.

darkroom (DARK room) – a room for developing photographs. It must be light tight. Only a safelight may be used for light.

department (dee PART ment) – a special or separate place; e.g., bindery department.

developer (dee VEL up per) – a solution containing chemicals for developing photographs.

developing a plate (dee VEL up ping uh PLAYT) – rubbing developer onto a plate which has a burned in image so that the image will appear.

diagram (DIE uh gram) – a plan or drawing showing what a thing is. A floor plan of a building,etc.

drawing board (DRAW ing BORD) – a board which may be adjusted to different positions for making illustrations or layouts.

education (edj uh KAY shun) – schooling, knowledge gained through training.

employee (em PLOY ee) – a person who works for pay.

employees entrance – a special doorway through which the workers enter the building in which they work.

employment (em PLOY ment) – work

emulsion (ee MULL shun) – a liquid containing light-sensitive salts used for coating photographic plates.

enlarger (en LAHR jer) – a projection printer, a camera which projects the negative onto a sheet of photographic paper so that the print can be made larger. It is a camera in reverse.

Exacto knife (egg ZAK toh nife) – a tool for cutting adhesive type and border designs in the preparation of copy, like a razor blade with a handle.

exit (EGG zit) – a way out, a way out of a building.

feeder platform (FEED er PLAT form) – board on which the paper is piled and fed into the press.

fixer (FIX er) – commonly called hypo, a solution which stops the action of the developer in photography.

flat (FLAT) – in offset lithography, negatives which have been placed and stripped and made ready for platemaking.

floor plan (FLOR PLAN) – a diagram showing the layout of a building or printing plant, shows location of rooms or departments.

folder (FOLD er) – a machine for folding paper in a print shop or bindery.

foot stapler (FOOT STAY pler) – a power stapler on a stand operated with a foot pedal.

fountain (FOUN tin) – containers on an offset press for holding ink or a water solution.

fountain solution (FOUN tin suh LOO shun) – called the "water," the chemical solution for the offset press.

French curves (FRENCH KERVZ) – plastic curved shaped forms for drawing curved lines.

goldenrod paper (GOHL den rod PAY per) – graph ruled yellow paper of which a flat is made, supports and masks the negatives.

graphic arts (GRAF fik arts) – arts, such as drawing, printing, lithography, etc.

guidelines (GIDE lines) – in layout or copy preparation, the ruled lines made with a T-square or ruler to keep the lines of copy straight.

gum arabic solution (gum AR uh bik suh LOO shun) – used to preserve offset lithographic plates.

hire (HIRE) – to employ, to pay a person for his work.

hole puncher (HOLE PUNCH er) – a machine for drilling holes in paper.

horizontal press (hor i ZON tull PRESS) – an elongated press, such as the Miehle 29.

hot type (HOT TIPE) – type made by slug casting machines such as Linotype or Intertype. Type cast in metal.

illustration board (ill uh STRAY shun BORD) – lightweight cardboard for drawings or layouts.

image (IM ij) – the part of the plate which prints or receives the ink.

impression cylinder (im PRESH un SILL in der) – the cylinder that carries the paper at the time it is being printed.

industry (IN dus tree) – a branch of business or trade; the printing industry.

information (in fer MAY shun) – facts, knowledge.

ink fountain (INK FOUN tin) – a container on an offset press which feeds the ink to the printing rollers.

interview (IN ter vyou) – a meeting of (usually) two people to discuss something, a job interview.

introduce (in truh DOOSS) – to present someone, e.g., "Dan, I would like you to meet Jodi."

job application (JOB ap luh KAY shun) – a printed form to be filled out with facts about the person seeking a job.

job ticket (JOB TIK et) – a paper with instructions for the workers.

kneaded eraser (NEED ed ee RACE er) – a self cleaning eraser that can be shaped, it's like a thick dough.

lamp (LAMP) a light or light bulb.

layout (LAY out) – a drawing showing size, position, color and instructions for printing of the lettering and pictures.

lens (LENZ) – as in a camera, a piece of optical glass for focusing the amount of light to enter when making a picture.

letterpress (LET ter PRESS) – printing from a raised surface.

light table (LITE TAY bl) – a table with a glass top under which a light is placed, used for opaquing and art work.

light-tight (LITE TITE) – without light, where light cannot enter. Light sensitive photographic paper is stored in a light-tight box.

linecasting (LINE kass ting) – machines that cast slugs of type in which all the letters are made in one piece for each line.

Linotype (LINE uh tipe) – a linecasting machine. Like the Intertype machine. Linotype and Intertype are trade names.

machine operator (muh SHEEN OP er ray ter) – one who runs a machine.

makeready (MAKE red dee) – getting the press ready for proper printing.

masking (MASS king) – protecting or blocking out parts of the negative or copy. Masking tape, red tape and goldenrod paper are used for masking.

master printer (MASS ter PRIN ter) – an expert printer, a skilled printer in business for himself.

mechanical (mi KAN i kul) – completed copy for photographing, a paste-up.

Miehle (MEEL) – trade name for several types of letterpress machines. Others are Heidelberg, Miller, Kelly, etc.

Multilith (MULL ti lith) – trade name for a small offset press.

negative (NEG uh tiv) – a photographic image in which the lights and shadows are reversed on a film. The negative image on a photographic plate. Prints are made from both.

occupation (ok you PAY shun) – a trade or employment. His occupation is platemaking.

offset lithography (OFF set li THOG ruh fee) – a printing process based on the principle that water and grease do not mix. An impression is made from a freshly printed sheet onto another sheet.

order or order blank (OR der blangk) – a paper or form which shows what a customer wants to buy. He wrote an order for 100 cards. Also called a job ticket.

opaquing (oh PAY king) – use of opaque paint to paint over spots on a negative where light is not supposed to come through.

opaque paint (Oh PAYK PAYNT) – a thick water base paint through which no light passes.

padding rack (PAD ding RAK) – a rack for holding a stack of paper to which adhesive is applied. The stack is then split into pads of paper. The rack keeps the paper from shifting.

paper cutter (PAY per KUT ter) – a machine for cutting paper. It may operate by hand or electricity, depending upon the type of machine used.

passenger (PASS in jer) – a traveler on a train, bus, ship, plane, etc.

paste-up (PAYST up) – copy pasted to the art board and made ready for the camera.

personal references (PURR suh null REFF uh renss) on a job application blank, the section asking for a list of friends or relatives who may be called upon to comment on your character.

photoflood lamp (FOH toh fludd LAMP) – a light used for burning a plate in a platemaker.

photographer (foh TOG ruh fer) – one who makes pictures with a camera.

photosensitive plate (foh toh SEN si tiv PLAYT) – in offset lithography, the thin sheet of aluminum or other material which has been coated with chemicals that are sensitive to light.

pica (PIE kuh) – the standard unit of measurement for printing. 12 points equal one pica, 6 picas equal one inch.

placed (PLAYSS) – employed, given a job.

platemaker (PLAYT MAY ker) – one skillful in the processes of burning and developing a lithographic plate. A machine that prints a picture from a negative onto a printing plate.

platen press (PLAY ten PRESS) – a letterpress which makes a print from a flat surface containing raised letters.

point (POINT) – a unit of measurement in printing. 12 points equal 1 pica or one sixth of one inch.

presensitized plate (pree SEN si tized PLAYT) – a lithographic plate which is manufactured with a photosensitive coating.

procedure (Proh SEED jer) – a way or method of doing something.

proofread (PROOF reed) – to read and mark errors to be corrected.

receptionist (ree SEP shun ist) – a person who greets visitors and answers telephone calls in a place of business.

reduce (ree DOOSS) – to make smaller as in photography, to make a picture smaller than the original.

relief printing (ree LEEF PRINT ing) – printing from a raised surface, such as letterpress.

roller (ROH ler) – the inking and dampening rollers on a printing press.

rubber cement (RUB ber si MENT) – rubber dissolved in benzol, used for paste-up work.

run (RUN) – the number of copies to be printed in a particular job.

safelight (SAYF lite) – a colored light used in a darkroom.

salesman (SAYLZ man) – a person whose work is selling.

schedule (SKED jool) – a timetable, a list of details.

sensitizing (SEN si tiz ing) – coating any material with an emulsion which is sensitive to light (photosensitive). Coat a plate with bichromated albumen solution.

sheet fed press (SHEET FED PRESS) – a press fed with individual sheets of paper, such as the ATF Chief or Multilith.

shelf life (SHELF LIFE) – the length of time sensitized material can be kept without spoiling.

shoot a negative (SHOOT A NEG uh tiv) – take a picture with a camera.

slug (SLUGG) – a piece of lead over 6 points thick. A linecast made on a linecasting machine.

solution (suh LOO shun) – a mixture of liquids and solids.

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stick-on type (STIK-on TIPE) – stock or manufactured type with a sticky backing, used for setting type in a layout.

stock (STOK) – paper

stock type (STOK TIPE) – cold type which is manufactured on sheets of acetate to be transferred onto layout or mechanical. Press-type, Art Type and Instatype are examples.

stripping (STRIP ping) – arranging negatives on goldenrod paper, making flats.

stripping table (STRIP ping TAY bl) – a light table. (see light table).

stylus (STY luss) – a writing tool with a metal point which is useful for lifting up letters of stick-on type.

time card (TIME KARD) – a card punched in a time clock showing the number of hours a person has worked.

time clock (TIME KLOK) – a clock with a device for punching the time onto a card.

tour (TOOR) – a short walk around. He was given a guided tour of the building.

trained (TRAYND) – educated in a trade.

transfer type (TRANSS fer TIPE) – stock type which is rubbed onto another surface.

T-square (T-skwair) – a T shaped ruler used for drawing parallel lines; in layout design it is used to keep the lines of type straight.

VariTyper (VAR i tip er) – a composing machine which has a keyboard similar to a typewriter. A large variety of type can be produced by changing the type faces.

vocational school (voh KAY shun ul SKOOL) – a place for learning a trade, such as printing, typing, sewing, etc.

web press (WEB PRESS) – a large rotary press that prints from a continuous roll of paper.

work schedule (WERK SKED jool) – a chart showing employees' working hours.

work-study program (WERK STUD ee PROH gram) – a plan for bringing together learning at school and on-the-job training.

STATE OF NEW JERSEY
DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION

ANSWER KEY FOR
YOU'VE GOT IT, DANNY!
LANGUAGE DEVELOPMENT IN GRAPHIC ARTS

ANNETTE ISAACSON, INSTRUCTOR
BERGEN COUNTY VOCATIONAL SCHOOL
PARAMUS, NEW JERSEY

EN-384A

CE 008 231

CHAPTER 1

Match the Words

1. depended
2. vocational school
3. prepared
4. interview
5. appearance
6. up-tight
7. arranged
8. work-study program

Word Endings

1. appearance
2. vocational
3. education
4. prepared
5. industrial
6. depended

Splitting Words

1. pre-pare
2. de-pend
3. in-ter-view
4. vo-ca-tion-al
5. ar-range
6. ap-pear-ance
7. ner-vous
8. pro-gram
9. co-or-din-a-tor
10. ed-u-ca-tion
11. in-dus-tri-al
12. co-op-er-a-tive

Alphabetical Order

1. appearance
2. arrange
3. cooperative
4. coordinator
5. depend
6. education
7. industrial
8. interview
9. nervous
10. prepare
11. program
12. vocational

Find The Missing Word

1. interview
2. up-tight
3. work-study program
4. C.I.E. Coordinator
5. appearance
6. depended
7. Beacon County Vocational School
8. Hi-Way Printing Company

Expressions

Any reasonable answer

* * * * * * * * * * * * * *

CHAPTER 2

Match the Words

1. machine operator
2. depended
3. arranged
4. confident
5. appearance

Find It In the Glossary

1. bellows
2. fountain
3. fixer
4. slug
5. blow-up
6. masking
7. flat
8. pica

Split the Words

1. hun-gry
2. op-er-a-tor
3. con-fi-dent
4. strik-ing
5. broth-er
6. Dan-ny
7. ma-chine
8. wor-ried

Alphabetical Order

1. brother
2. confident
3. Danny
4. hungry
5. machine
6. operator
7. striking
8. worried

Knowing the Facts

1. yes	6. no
2. no	7. yes
3. no	8. no
4. no	9. no
5. yes	10. yes

Spelling Stair

worry
reason
machine
prepared
confident
sorry
depend
chances
operator
vocations

Abbreviations

1. Dr., St.
2. NJ
3. St., NY
4. Rte.
5. Rd., Co.
6. U.S., Lt.

* * * * * * * * * * *

CHAPTER 3

Match the Words

1. trained
2. entrance
3. firmly
4. graphic arts
5. receptionist

CHAPTER 3 cont.

Match the Words

6. job application
7. hire
8. introduce
9. information

Word Endings

arranging, arranged
hiring, hired
explaining, explained
preparing, prepared
interviewing, interviewed
depending, depended

Splitting Words

1. Of-fice
2. in-tro-duce
3. re-cep-tion-ist
4. gripped
5. firm-ly
6. ap-pli-ca-tion
7. in-for-ma-tion
8. graph-ic
9. train-ing
10. ner-vous
11. en-trance
12. com-pa-ny

Alphabetical Order

1. application
2. company
3. entrance
4. firmly
5. graphic
6. gripped
7. information
8. introduce
9. nervous
10. office
11. receptionist
12. training

Choose One

1. c, 2. b, 3. a,
4. c, 5. b.

* * * * * * * * * * * * *

CHAPTER 4

Match the Words

1. department
2. placed
3. paste-up
4. schedule
5. process
6. offset printing
7. employees
8. copy
9. photographing

Classify

HOME, mother, living room, family
SCHOOL, classroom, teacher, CIE Coord. education
INDUSTRY, interview, hire, employee, occupation, machine operator

Splitting Words

1. off-set
2. print-ing
3. de-part-ment
4. pro-cess
5. cop-y
6. placed
7. pho-to-graph
8. em-ploy-ee
9. sched-ule
10. pro-gram

Alphabetical Order

1. copy
2. department
3. employee
4. offset
5. photograph

CHAPTER 4 cont.

6. placed
7. printing
8. program
9. process
10. schedule

Knowing Facts

1. yes
2. yes
3. no
4. no
5. yes

Abbreviations

1. Mon.
2. Tues.
3. Wed.
4. Thurs.
5. Fri.
6. Sat
7. Sun.

1. Jan.
2. Feb.
3. Mar.
4. Apr.
5. Aug.
6. Sept.
7. Oct.
8. Nov.
9. Dec.

Understand a Sched.

2. Tues., Thurs. 8:30 to 4:30
3. 8:30 to 4:30
4. Sat.
5. Tues.
6. 6 + Danny
7. 35
8. Mon.

Paste-up

1. light table or drawing board
2. T square
3. The art board
4. rubber cement
5. find errors

CHAPTER 4 cont.

Materials Quiz

1. see glossary
2. yes
3. stick-on
4. opaque paint
5. drawing curved lines
6. yes
7. rubbed on

CHAPTER 5

Match the Words

1. embarrassed
2. apologize
3. letterpress
4. accidentally
5. salesman
6. appointment
7. diagram

Review

1. depended
2. employees
3. confident
4. appearance

Splitting Words

2. em-bar-rassed
3. a-pol-o-gize
4. di-a-gram
5. ap-point-ment
6. let-ter-press
7 sales-man
8. re-ceiv-er
9. ex-cuse
10. build-ing

Alphabetical Order

1. accidentally
2. apologize
3. appointment
4. building
5. diagram
6. embarrassed
7. excuse

CHAPTER 5 cont.

8. letterpress
9. receiver
10. salesman

One Out Of Two

1. diagram
2. letterpress
3. embarrassed
4. apologize
5. arranged

Abbreviations

1. Oct.
2. St.
3. lb.
4. gal.
5. Mr.
6. Co.
7. p.
8. a.m.
9. N.J.
10. MPH
11. Thurs.
12. no.

Spelling Stairs

1. August
   diagram
   salesman
   apologize
2. employ
   appoint
   industry
   timetable

Photographing Copy

1. copy camera
2. yes
3. lens cleaning tissue
4. yes
5. back end
6. safelights
7. rubber gloves
8. exposed film

Glossary

Refer to glossary

CHAPTER 6

Match the Words

1. customer
2. master printer
3. time clock
4. business card
5. apprentice
6. punching in
7. tour
8. production
9. time card
10. account
11. exit
12. order

Word Review

1. appointment
2. diagram
3. letterpress
4. salesman

Splitting Words

1. ap -pren-tice
2. mas-ter
3. busi-ness
4. or-der
5. ac-count
6. cus-to-mer
7. pro-duc-tion
8. punch-ing
9. un-der-stand
10. ma-chin-ery

Alphabetical

account
apprentice
business
customer
machinery
master
order
production
punching
understand

Phrases

1, 3, 5, 6

Find Missing Word

1. business cards
2. master printer
3. production
4. apprentice
5. customers
6. punching in
7. order, account
8. exit
9. time card, time clock
10. tour

Understand a Diag.

1. receiving
2. offices
3. paper cutter, foot stapler, folder, etc.
4. bindery
5. employees
6. ATF Chief, Multilith, offset dup.
7. horizontal
8. goldenrod
9. stripping,opaquing
10. enlarger, tank, copy camera
11. letterpress
12. paper, ink, film, etc.

Business Card

2,000, $22.50
black, medium

Develop the Neg.

1. tray, developer thermometer, clock darkroom.

CHAPTER 6 cont.

2. no
3. larger than the negative
4. 68 degrees
5. darkroom
6. 5 minutes
7. 5 to 10 minutes
8. fixer, tray
9. sponge it, hang to dry
10. Step 3

CHAPTER 7

Match the Words

1. departs
2. timetable
3. arrives
4. passenger
5. applied
6. bus schedule
7. public transportation
8. bus terminal

Splitting Words

2. pub-lic
3. trans-por-ta-tion
4. ter-min-al
5. de-part
6. ar-rive
7. time-ta-ble
8. pas-sen-ger
9. Dan-ny
10. wal-let

Alphabetical

1. applied
2. arrived
3. Danny
4. depart
5. passenger
6. public
7. terminal
8. timetable
9. transportation
10. wallet

More Than One

employees, presses, companies, duplicators, offices, processes, productions, copies

Knowing the Facts

1. yes
2. no
3. yes
4. no
5. no
6. yes
7. yes
8. yes
9. no
10. yes

Out of Sight Letters

A, C, D, E, F, G, H, I, J, K, L, M, O, P, Q, R, T, U, V, Z.

Bus Schedule

1. 7:49
2. Glenwood
3. 18, Sun., Hol.
4. 8:45, no
5. 7:49
6. 7:06

Quiz, Stripping, Opaq.

1. light table, goldenrod paper, negative tape, T-square
2. dull side
3. exacto knife, razor blade
4. yes
5. no
6. opaque paint
7. plate
8. T-square
9. blade

CHAPTER 8

Match the Words

1. break in
2. impression
3. respected
4. platemaking
5. advice
6. program

Word Review—Synonyms

1. departs
2. timetable
3. passengers
4. terminal

Splitting Words

1. im-pres-sion
2. pro-gram
3. plate-mak-ing
4. re-spect-ed
5. ad-vice
6. Mar-ty
7. re-view
8. stu-dent
9. year-book
10. teach-er

Alphabetical

advice. impression
Marty, platemaking,
program, respected,
review, student,
teacher, yearbook

Opposites

1. loose
2. arrive
3. hire
4. public
5. confident
6. depart

Burning a Plate

1. platemaker
2. sensitized plate
3. Yes
4. aluminum
5. vacuum frame
6. the glass
7. 25—30
8. photoflood, carbon arc
9. 8 min.
10. 2 min., No.

Developing a Plate

1. No.
2. a sponge
3. No.
4. Yes
5. a little gum
6. a teaspoon
7. lukewarm water
8. developer and a sponge
9. No. 10. gum arabic

Match the Expression

3, 4, 1, 2.

CHAPTER 9

Match the Word

1. cameraman
2. VariTyper
3. stripping
4. foot stapler
5. crew
6. opaquing
7. folding machine
8. negative
9. light table
10. bindery room
11. presswork
12. operating

Spelling Stairways

light, camera, stapler
opaquing.
table, opaque, operate,
stripper.

Splitting Words

1. Vari-Typ-er
2. fold-ing
3. stap-ler
4. bind-er-y
5. op-er-at-ing
6. cam-er-a-man
7. ta-ble
8. strip-ping

CHAPTER 9 cont.

9. o-paqu-ing
10. neg-a-tive
11. press-work
12. in-ter-est-ing

Alphabetical

bindery, cameraman
folding, interesting
negative, opaquing
operating, presswork
stapler, stripping
table, VariTyper

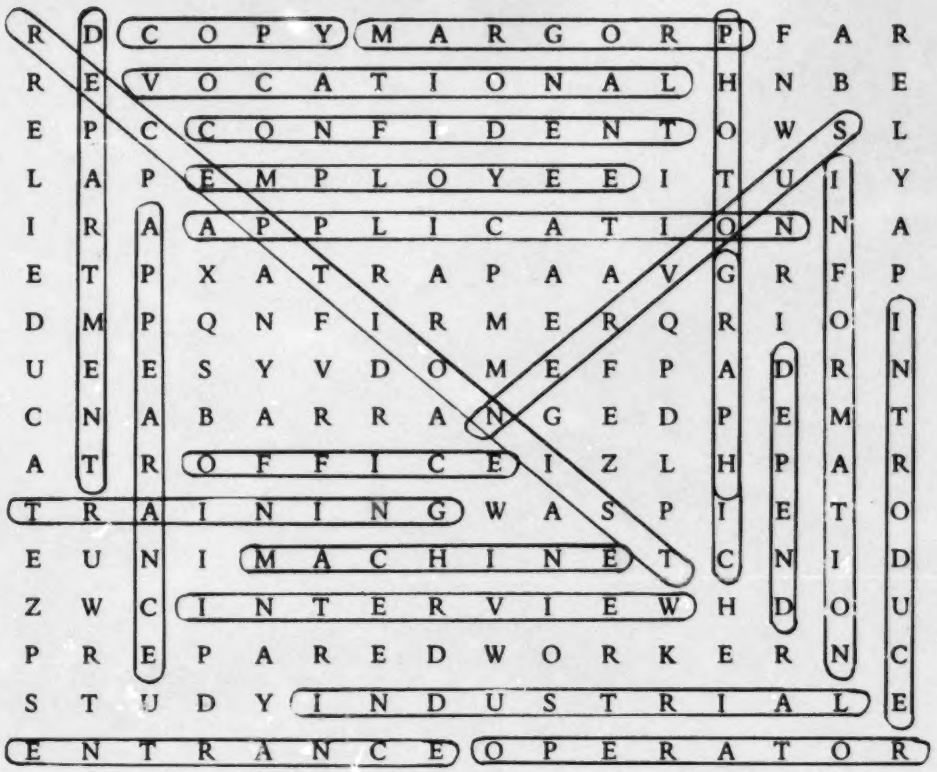
Print from a Plate

1. c, 2. b, 3. b,
4. c, 5. a, 6. b,
7. c, 8. a, 9. b,
10. a

Measurement for Printers

1. 6 picas, 12 picas, 42 picas
2. 12 points
3. 18 picas
4. 7 inches, 42 picas
5. 3 picas
6. 2 inches
7. 24 points

Word Find Review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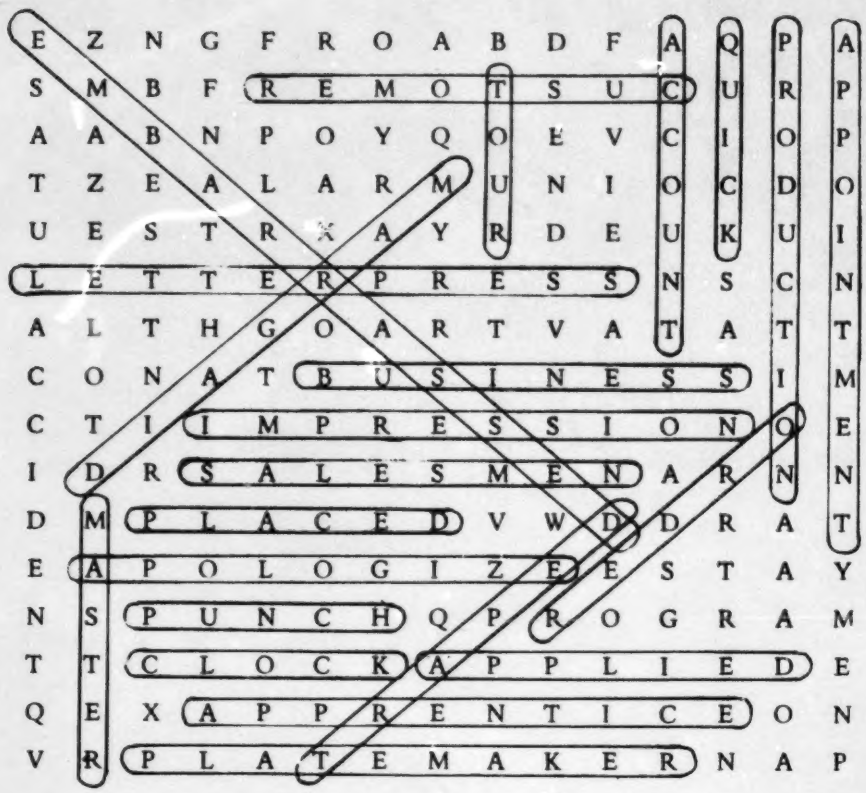
R E V O C A T I O N A L H N B E
E P C C O N F I D E N T O W S L
L A P E M P L O Y E E I T U I Y
I R A A P P L I C A T I O N N A
E T P X A T R A P A A V G R F P
D M P Q N F I R M E R Q R I O I
U E E S Y V D O M E F P A D R N
C N A B A R R A N G E D P E M T
A T R O F F I C E I Z L H P A R
T R A I N I N G W A S P I E T O
E U N I M A C H I N E T C N I D
Z W C I N T E R V I E W H D O U
P R E P A R E D W O R K E R N C
S T U D Y I N D U S T R I A L E
E N T R A N C E O P E R A T O R

INFORMATION	PROGRAM	INTRODUCE
RECEPTIONIST	VOCATIONAL	OFFICE
APPLICATION	INTERVIEW	EMPLOYEE
TRAINING	DEPEND	MACHINE
NERVOUS	INDUSTRIAL	OPERATOR
PHOTOGRAPH	ENTRANCE	CONFIDENT
APPEARANCE	GRAPHIC	DEPARTMENT

Word Find Review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S M B F R E M O T S U C U R P
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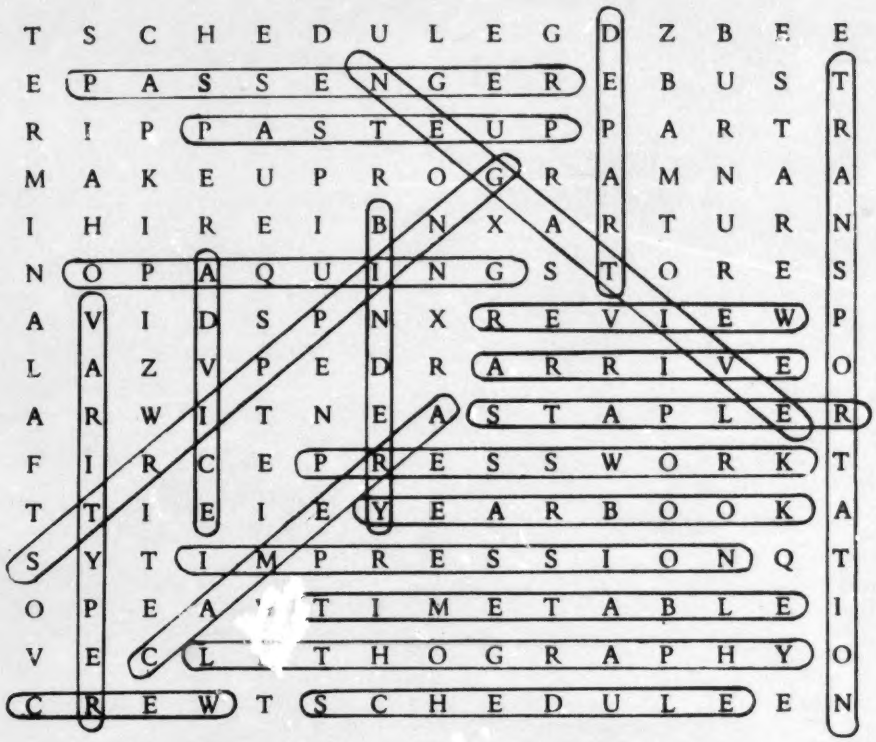
U E S T R X A Y R D E U K U I
L E T T E R P R E S S N S C N
A L T H G O A R T V A T A T T
C O N A T B U S I N E S S I M
C T I I M P R E S S I O N O E
I D R S A L E S M E N A R N N
D M P L A C E D V W D D R A T
E A P O L O G I Z E E S T A Y
N S P U N C H Q P R O G R A M
T T C L O C K A P P L I E D E
Q E X A P P R E N T I C E O N
V R P L A T E M A K E R N A P

EMBARRASSED	PRODUCTION	ORDER
DEPART	APOLOGIZE	ACCOUNT
BUSINESS	APPRENTICE	CUSTOMER
LETTERPRESS	MASTER	SALESMEN
IMPRESSION	APPLIED	PLACED
CLOCK	APPOINTMENT	TOUR
PLATEMAKER	DIAGRAM	PUNCH

Word Find Review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E P A S S E N G E R E B U S T
R I P P A S T E U P P A R T R
M A K E U P R O G R A M N A
I H I R E I B N X A R T U R N
N O P A Q U I N G S T O R E S
A V I D S P N X R E V I E W
L A Z V P E D R A R R I V E
A R W I T N E A S T A P L E R
F I R C E P R E S S W O R K
T T I E I E Y E A R B O O K
S Y T I M P R E S S I O N Q
O P E A T I M E T A B L E
V E C L I T H O G R A P H Y
C R E W T S C H E D U L E E N

OPAQUING	PRESSWORK	IMPRESSION
STRIPPING	VARITYPER	TIMETABLE
BINDERY	STAPLER	SCHEDULE
CAMERA	ARRIVE	CREW
NEGATIVE	DEPART	YEARBOOK
PASTE-UP	ADVICE	PASSENGER
LITHOGRAPHY	REVIEW	TRANSPORTATION